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THE

NAUTICAL MAGAZINE.

THE

NAUTICAL MAGAZINE

AND

Naval Chronicle,

FOR 1814.

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THE

NAUTICAL MAGAZINE

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Naval Chronicle,

FOR 1844:

Mediterranean Navigation.—*Notes of Mr. R. Thompson, Master of H.M.S. Vanguard, from 2nd April, 1840, to 16th August, 1843.*

Syracuse.—Her Majesty's ship *Vanguard* anchored here 5th Oct., 1841, a quarter of a mile from the landing-place; summit of Mount Etna N. 4° W., the aqueduct N. 10° W.

The light is scarcely worth its name, as it cannot be seen more than two or three miles. A good place for water; we obtained 65 tons a day, working fourteen hours. A good long hose and the force-pump will be found of great use.

Sunday 10th, leaving Syracuse for Malta with a light north-west wind, we had a hard heave to get our anchor, and on arriving outside found a strong current running to the southward, although we have had southerly and south-west winds for the last two or three days.

The Dog rock lies north-east more than half a mile from the Light-house Point, it is just awash, and right in the fairway of ships entering the harbour from the northward; in the night it should be cautiously approached.

Gozo.—The scarcity of water at Malta caused Sir John Ommanney to order the *Vanguard* to this place to try the watering-place, for which purpose we sailed on Sunday 4th of July, 1841, at 7h. 30m. A.M., and anchored off the Port of Maggiaro at 4h. 30m. P.M., rather more than a quarter of a mile from the watering-place, with the following bearings:—

Tower on Cumino, S. 37° E.; Flagstaff, Fort Chambray, N. 67° W.; Watering place N. 60° W.; anchorage 22 fathoms hard sand. This anchorage is open from S. 5° W. to S. 83° W., and from S. 74° E. to east.

The soundings in the passage are very irregular, varying from 8 to 12, and sometimes to 30 fathoms, and the bottom generally hard sand, covered with weeds and grass. The *Vanguard* worked in from the north-east, wind south-west, making five tacks in the passage, but I do not recommend it to large ships. The Gozo side is the steepest and most clear. On the north-west side of Cuminito is a reef of rocks running out two cables' length with 5 fathoms close to. The bay of Maggiaro is only fit for boats. We got 60 tons of water in ten hours; boats lay

alongside a wharf, and fill from a fountain with a short hose; they may always lay here and water in moderate weather; we only remained three days, and then returned to Valetta.

Passage from Malta to Athens, and round the Archipelago, 1842.—Left Malta on the 28th of June, in company with H.M.S. *Cambridge* and *Phœnix,* for Athens: made Cape Matapan at midnight, July 1st, during the passage had north and north-east winds with a current running to the south and S.S.E., about three-quarters of a mile an hour.

Having run through the Cervi Passage with a southerly wind, passed between Karavia and Belle Poulo, and on Monday July 4th, 2 P.M. anchored in the bay of Salamis in 18 fathoms, sandy bottom, the extremes of the island S. 35° E. to S. 20° W., a short three-quarters of a mile from the centre. During our stay the wind was from N.N.E., and squally for boats. Very warm and sultry; thermometer 80° in the shade. Beef, very fair, 7½*d.* the oak = 2¾lbs.; exchange 51*d.* the Mexican dollar.

I am not aware of any danger working in or out of this harbour, as I have seen a three-decker work in, and I have sounded both passages. The anchorage is not particularly good, but I should say the best is off the low sandy point at the north of the bay. No water here, but by sending to the Peireus, where it is not good, and only to be had in small quantities.

Athens is improved since I last saw it in 1833; but even now I cannot say much for it. Here are two or three fair inns, but the charges are high, and every one shews a disposition to impose.

Sunday, 10th July, left Salamis by the Western passage, with a light north-west wind, although it had been blowing hard in squalls during the night from N.N.E. to N. N.W. The barometer 29·70. The breeze led us up to Isle St. George, when it drew round to north-east, worked between it and Cape Colonna, afterwards between Zea and Thermia, when the wind drew round to north-west during the night, which enabled us to pass to the northward of Syra, and between it and the small isle Joura. At daylight we were off the town of Syra, where we found the French admiral, to whom we delivered our despatches and passed on for Anti Paros, taking the passage inside of Light-house Island, and the Small Island to the south of it. About N.N.W. three-quarters of a mile from the last mentioned isle, we saw a dangerous ledge of rocks which to a stranger might be of serious consequence. Our pilot says there is a rock in the centre of this passage, having only five feet water on it, and on which he says three merchant vessels have been lost. As I did not land at Syra I had no opportunity of making enquiry.

Captain Richardson of the *Phœnix,* had lent us a chart of the Archipelago, corrected to 1838, in which chart a shoal is laid down in the passage between Naxia and Paros, I mean going round the north end of Paros; there is no mention of this shoal in any of the Books of Directions, or, in the Admiralty plan; but the chart being the latest date, we decided on going round by the south end of Anti Paros, passing of course outside of Strongilo, which we did at noon, and hauled gradually round to the eastward; about 1 P.M. passed the islands of Sortidop, when the breeze began to freshen, and soon reduced us to double reefs.

We ran on, and tacked about a mile east of Pigeon Island, passing between it and the Isle of Treo, and at 2h. 30m. P.M., thirty-three hours from Salamis, came to in 8 fathoms on a clean sandy bottom with the following bearings:—Mount Capriso N. 31° E., Pigeon Island middle of the three N. 77° E. Watering spring N. 44° W., a short mile from it, at this anchorage the boats will sail both ways. We got 78 tons of water in ten hours, with the launch and pinnace, it is procured from a spring running from a rock eighteen feet high, to which you attach a hose with large mouth, and it will then run into the boat; the hose should be 125 feet long. The water is remarkably good. Supplies are, beef, very fair, a few vegetables, and indifferent bread. Thermometer in the shade from 78° to 80°. The day we anchored here it blew very hard at N.N.E., and split several sails.

Off the watering place there are some sunken rocks pretty close in, but dangerous for boats under sail.

While here we learnt from an officer of the *Beacon* that the shoal which caused us to go round Anti Paros has 18 fathoms on it.

I strongly recommend good sails and running rigging for all ships going the summer trip round the Archipelago, as they are subject to heavy squalls, and have to pass through several narrow passages.

Passage from Paros to Tenedos, three days and half.—Having completed water we left Port Treo on the morning of the 13th July, and proceeded round the west end of Anti Paros, passing outside of Strongilo and between it and Seffanto; the north trade winds enabled us to pass within two miles of Delos, and between Dragonisi and Stafodia, small islands off the east end of Miconi, which we did by 10 o'clock in the evening, the wind continuing north, south, and north-east. We continued plying to windward with delightful weather. By Thursday evening, 8 o'clock, tacked within two miles of the Coloyeri rocks, there are two of them, the smallest lying north-east about quarter of a mile from the large one. I am not aware of any danger about them, and the largest rock may be seen ten miles from a line-of-battle-ship's deck.

The following evening, Friday 15th, we were within ten miles of the island of St. Strachi, here we began to feel the effects of the strong current running out of the Dardanelles; this continued during the night and up to Basikia bay at the rate of two miles an hour. At daylight of the 16th, saw the Peak of Tenedos, Cape Baba, &c., the former north-east, 7 or 8 leagues, at noon we were within ten miles of it, with a fresh north-east breeze. Off the Point Istambool, which may be known by some ruins, and a Turkish mosque near it, I observed some discoloured water; the pilots state there is a shoal running off a mile from this point.

We worked between Tenedos and the main, keeping near the island side as it is said there are shoals running off the opposite side.

Having arrived as far as Castro Tenedos, a poor miserable place, we worked between the small island of Malvino and the town, the passage is not more than three-quarters of a mile wide. Several sunken rocks lie off this small island, and the pilots say it is not safe to pass to the eastward of it. Having got to the northward of the island I

would recommend not stretching far to the north-east until you are at about two or three miles to the north of all the rocks off Tenedos, then run across about E.N.E., four or five miles and you will fetch Basikia Bay, but should the wind fail, be cautious not to let your ship be set to the southward towards Malvino, nor to the eastward of it. I would recommend anchoring and only waying with a commanding breeze, as the current sets strong to the south and south-west. The pilots say the windmills kept open north of Malvino will keep a ship clear of the shoals in this part.

Vanguard anchored in Basikia Bay in ten fathoms, soft bottom; About a mile from the beach; Peak of Tenedos, S. 70° W.; Cape Sigia, north-west point of the bay, N. 15° E.; Tomb of Patrocleus, a small conical hill, N. 80° E.

Off Cape Sigia is a shoal extending out some distance.

Rabbit Islands are surrounded by shoals and sunken rocks. A merchant brig, the Amelia of London left Basikia on Sunday 17th, and while standing to the north-west, at 9h. A.M., at about two miles from the north-east end of the Great Rabbit, she struck on a bed of rocks, having only ten feet water on them, the brig drawing fourteen. We were on board of her fourteen hours with a large party of men, and only got her off by throwing 70 tons of her cargo (coals) overboard. While on board this brig found the current running strong to the south-west, I should say three, or perhaps, four miles an hour, we could barely manage to get a cutter ahead against it, although she had a crew of fine strong young fellows.

A few days after this the "Pacha" of London, bound to Constantinople with a cargo worth £50,000 ran on the same spot, and was only got off by hoisting out the most of her cargo. We were on board of this vessel with a large party of men twenty-four hours before she floated. The master of her, an old trader here to Constantinople, knew nothing of the danger on which he had run his vessel; there is little doubt but for the timely and well directed assistance given these vessels, they would have become total wrecks.

I understand two other merchant vessels have run on this spot within a short time, and both became perfect wrecks; one was the Meanwell, of 297 tons: the current runs from the Dardanelles directly on the Rabbit Islands, and in light winds they should be cautiously approached.

While at Basikia from 16th to 31st July, the weather was particularly fine, with the exception of one day, which was two days after full moon, when it blew strong from the north-east for about eight hours; with this exception we had delightful weather, thermometer seldom higher than 76°, and during the nights falling to 70 with cool refreshing breezes.

Mount Athos was distinctly seen after sunset about 87 miles off.

Got a little water from a rivulet close to the landing place, but it was only fit for washing.

Sportsmen seldom brought off more than a couple of hares, and two or three brace of partridges; one day three people shot 23 brace of partridges at Tenedos. Very little success with the seine; supplies are very fair, beef and onions supplied by George at 3*d.* per lb.; geese and turkeys, pumpkins, melons, &c.

A number of merchant vessels pass this anchorage daily, and I am sorry to say that few pay that respect due to a man-of-war, which they ought to do, by shewing their colours, until they get on shore and want assistance *

The following bearings were taken from *Vanguard's* anchorage:—

Hill Tenedos . .	S. 71° W. compass.
North west Point . .	S. 85° W.
South-east Point . ,	S. 45° W.
South Point Basikia Bay	S. 19° W.
North Point . .	N. 15° E.
Town of Castro . .	S. 62° W.
Malvina . .	S. 54° W.
E. point Great Rabbit .	N. 32° W.
South-west point . .	N. 44° W.
Centre Small Rabbit .	N. 46° W.
Tomb Patrocleus .	N. 83° E.

From Basikia Bay to Smyrna, fifty-three hours.—Left Basikia on Sunday, 31st July, at 6 A.M., with a light northerly wind, which died away when within a mile of Malvina, a strong current running to the south-west; but as we drew towards Tenedos a breeze sprung up from the south-west, with which under all plain sail we beat through the passage. Here we met a Turkish frigate, and some twenty merchant ships, crowding all sail for the Dardanelles, in order to take advantage of the fair wind.

The barometer very low, weather close and sultry. During the night when off Cape Baba the wind drew round to north-west, which led us round Cape Sigre Metelyne, by noon of Monday. We were becalmed off Port Olivieri, and towards sunset a breeze sprung up from the southward. Glass unusually low, 29·40, for this season, with close sultry weather. Decided on keeping outside for the night; in the morning made sail up the gulf, wind south-west, passing Long Island. On approaching Partridge Island had heavy squalls from south-west, at 11h. A.M. 2nd August, anchored off Smyrna in 9 fathoms, off the consul's house, which is close to the water, and may always be known by the flag.

Found English papers here of the 16th *July*, informing us of the death of the Duke of Orleans. This passage would have been made in much less time, but for the threatening weather, which prevented us entering the gulf sooner. This night, hard rain, thunder, and lightning. Remained at Smyrna from the 2nd to the 16th August, thermometer ranging from 75° to 82°. Wind generally north-east, which always makes the weather close and oppressive. Found our old friends Mr. Mitchell and old Bonifacio as obliging as ever. Several good inns; the one most liked by us was the Pension Swiss. Plenty of good fruit; melons in abundance; good fish; ice $2\frac{1}{2}d.$ the oak$=2\frac{3}{4}$ lbs.

Getting underway on the 10th, commenced heaving at 3h. 30m. A.M, but found the anchor so fast in the ground that we parted two runner pendants, $7\frac{1}{2}$-inch, and many lashings before we could get our anchor,

* We hope the importance of this remark will not be lost on the commanders of our merchant ships for their own sakes. It was not so formerly, and as much fault lays with men-of-war in not obliging ships to show their colours.—ED.

and more than all lost so much time, that the land wind was done before we could get it up.

N.B.—Sight your anchor the night before you intend leaving, and endeavour to be within a mile of Smyrna Castle by daybreak.

We got away on the morning of the 11th at 3 A.M., with a light north-west wind made all sail, steered W. ½ S., and carried 11 fathoms to within a mile of the castle, when the wind came round to W.S.W., trimmed sharp, and hauled on board the fore and main tacks, two good leadsmen in the chains, going briskly, and tacking in 7½ fathoms. Here our noble ship did her work in superior style, always staying like a jolly-boat. H.M.S. *Cambridge* in Company.

Vanguard anchored off Vourla the same afternoon at 4h. *Cambridge* came down the next day, just as we had completed our water. So much for Sir William Symonds' ships. Our anchor lay in 13 fathoms stiff clay, with the following bearings; (about a mile from the watering place;) Watering-place, N. 74° W.; Tower on Peninsula, N. 40° W. Here boats sail both ways. In going down passed between Round Island and the little islet of Clazomine carrying 15 fathoms, current running strong to the southward.

The watering-place is easily known by the old White Tower to the north of it. We used the force pumps at the fountain, and got 150 tons in a day. Water remarkably good; but it is necessary to place sentinels round the fountain, as there are several small grog shops.

I would not recommend the passages between Long and Partridge Islands as a shoal runs off the former, and also off W.S.W. end of the Partridge; there is also foul ground between Round Island and St. Johns. I had no opportunity of examining these passages only in going in with the ship between Round Island and the small islet north of Clazomine, do not stand very close to this islet, as we found a strong current setting on it, owing, as I suppose, to the almost constant northerly wind.

Passage from Vourla to Beirout, from the 15th to the 20th August, 1842.—Wayed at 1h. 30m. P.M. passed between Round Island and Clazomine, and worked down to the north-west end of Long Island, when the wind came from the Metelyne passage; this led us round Karabournu and Scio, passing between it and Ipsera.

On the 16th at noon, we were nine miles south of the south-west point of Nicaria, a fresh breeze from N.N.E. to N.W., with a strong westerly current passed between Patmos and Levata, and ten miles on the west side of Kalimnes, then steered S. ½ W. for Madonna, but owing to the strong westerly current we did not see it; stood on, and made St. Johns and the small island south-east of it; then kept her E.S.E. 18 miles for Piscopia; a moonlight night. I believe this part of the Archipelago is but imperfectly known, it certainly requires care in conducting a ship; not that there are any hidden dangers, but one island may be taken for another, and the Pilots are worse than useless, for they always pretend to know, when in nine cases out of ten they are quite ignorant, and in fact, seldom tell the truth.

I do not speak from any ill feeling towards them, but merely to caution my brother officers who may not know them, never to trust them, and in this I think I shall be borne out by every executive officer.

I have had many sleepless and anxious nights through their ignorance.

Daylight saw Piscopia moderately high, with several sharp pointed hills on it; hauled up E.b.N., and at 11h. hove to off the low sandy point at the north-west point of Rhodes, to wait for the *Cambridge*, now many many miles astern; she left Vourla with us; 2 P.M. she joined company. Filled and steered south-east for Cyprus. The following day began to feel the unpleasant weather usually felt on the coast of Syria, wind westerly; thermometer 80° in the shade; but very close, damp, and sultry; latitude 35° 1°, longitude 29° 48′ E.; found a strong current running to W.b.S.

On the 19th, latitude 34° 19′ longitude 32° 24′ E. noon; Cape Gatto N. 65° E., twenty-eight miles, not in sight, hazy weather, passed this cape at twenty miles, but did not see it.

Saturday 20th, at daylight saw the mountains of Lebanon E.S.E., and at 8 o'clock saw the town of Sidon south-east four leagues; there are two hills at the back of Sidon which may be seen at a great distance, they serve as a good mark. As we approached the land found a strong southerly current, although in October 1841, found it running strong to the *north*.

Cape Beirout makes like an island, and runs out to the westward to a low point, when to the southward of it, has a red sandy appearance, shoal water runs off it some distance: when the town bears south-east haul in for it, and pick a berth under *easy* sail. I consider it an indifferent anchorage, as the water is *deep* and *uncertain*, although the holding is good, and there is always a strong off-set.

Vanguard anchored in 29 fathoms, red clay, veered to 100 fathoms, when she lay in thirty-six our bearings were, about a mile from the landing place,—Beirout Castle S. 15° W.; Beirout extreme point, S. 74° W.; some detached rocks towards St. George's Bay S. 67° East.

H.M.S. *Inconstant* two cables inshore of us in eleven fathoms, her bearings, perhaps, her log book will shew? *a capital berth*.

Cambridge two cables *outside* of us in *eleven fathoms*? Her bearings?

Had a very heavy westerly swell about the time of full moon.

Wind generally about W.S.W. with calm and light land winds at night. Thermometer averaging about 80° in the shade, weather very oppressive.

Supplies.—Beef, mutton, onions, very fair, and reasonable. Plenty of turtle. Water not to be had in any quantity near the town, the nearest place is the Dead or Cat river, but here there is a heavy surf.

Latitude of Consul's house Beirout 33° 53′ 15″ S., long. 35° 30′ 15″ E.; Variation 8° 20′ W. Exchange 4*s*. 4*d*. Mexican dollar.

The Dog River lies E.N.E. about six miles from the anchorage of Beirout; *Vanguard* anchored here on the 1st Sept. in ten fathoms, our bearings were, Bridge just open of the Bluff E.S.E.; Centre of Beirout S.W. ½ W., about three-quarters of a mile outside of the bar.

We went here for water, being the only decent place on this part of the coast; anchored the launch outside the bar with a kedge of 11 cwt., 7-inch hawser, veered her into eight feet, and with her masts and ship's trysail gaff as a derrick, hoisted the casks into the barge and pinnace after they were hauled out to her by a messenger of 3½-inch

block over the stern, another on shore to the ring of a small anchor, and the two ends of the rope spliced together: by this means the people on shore are able to haul the full cask off, and the empty on shore.

Got eighty tons in twenty hours, it is very good, but great care is necessary going over the bar. I visited this place when the *Cambridge* was watering, it was then blowing hard at south-west with a heavy swell, so much so that she got only three or four tons in a day, and damaged several casks. I doubt if the ship had been wanted if she could have wayed with safety from this spot while this breeze was blowing. This anchorage may do in the summer time, but in the winter I do not consider it safe for a large ship.

Tripoli, coast of Syria, water may be got here, but I believe it is but indifferent as well as the anchorage.

Vanguard's anchorage at Corfu.—Lighthouse south; Cape Crido S. 20° E.; Lazaretto N. 50° W.; good summer anchorage.

On leaving this with H.M.S. *Howe* with a south-east wind, we ran through the Funnel or northern passage which is quite safe.

Passage from Malta to Port Mahon, December 1842.—12th moored in Malta harbour, the Cyclops arrived from Port Mahon bringing information of H.M.S. Formidable having been on shore on the Coast of Spain near Barcelona, where she had received serious damage.

Daylight 13th, *Vanguard* was ordered to complete for six months stores and provisions, and receive from *Cyclops* fourteen 32-pound guns belonging to *Formidable,* and all the gear, &c., necessary for heaving a line-of-battle ship down from the dockyard.

Everything being on board by Tuesday evening, the ship drawing 25 feet 6 she was reported ready for sea, but as it was blowing a gale at north-east it was not deemed advisable for the *Cyclops* to tow us out of the harbour lest she should damage some of her machinery, pressing against such a heavy sea as was then running across the harbour, or rather into the harbour. This weather with a north-west wind continued until the morning of the 16th, when it moderated, and we left at 9 A.M., stretching over for Cape Passaro, a fresh breeze at north-west, a head sea and strong lee current; at 4 P.M. tacked about eleven miles from Cape Passaro.

We continued beating and endeavouring to round Cape Bon, which was not accomplished for eight days, and in fact we only made in that time 160 miles, and experienced much bad weather, and at times tremendous heavy squalls, which reduced us to a close reefed main topsail merely to steady her, and added to all this the current was always running to the south-east at the rate of two miles an hour; in fact to keep the sea in a sailing vessel and hold your own requires good sails and running rigging. Were I in a merchant ship, situated as we were, I should not for one moment hesitate about running back for Malta, or perhaps, seek an anchorage off Ras al Mustaffa, where with a westerly or north-west wind, a vessel may lie in safety and save wear and tear.

On the ninth day succeeded in rounding Cape Bon, and by daylight of Christmas-day we were off Sardinia; during the twenty-four hours found a strong current running to the northward.

This being Christmas-day, and having had a succession of hard gales,

our *good* crew (a better disposed set of men never met,) had a quiet comfortable day, and enjoyed themselves like steady good fellows.

26th, 8 A.M., Mahon N.W.b.W. 57′ ran on till 3 A.M., when the island was observed ahead about ten miles. Hove to with her head off shore, and sounded in sixty-six fathoms coarse sand.

N.B.—The south end of Minorca and the small islet off it (Aqu?) is very low, and should be approached cautiously at night.

Daylight found ourselves off the entrance of the harbour. 11h. the *Cyclops* came out, took us in tow and walked us up the harbour at the rate of 4½ knots; she had experienced as well as ourselves much boisterous weather, and was six days making the passage.

Having been towed up to the dock-yard, moored with two bowers, sixty fathoms on each, and open hawse to north-west, found H.M.S *Formidable* lashed to the dock-yard, cleaning her hold and making ready for heaving down.

Vanguard unbent sails, down top-gallant-yards, &c., during the night the glass fell 3-tenths, and at 8 in the morning 29·98, blowing strong at north and N.b.E., which continued until the 30th, when the ship drove on best bower (northern anchor). We then took a stream cable of 13-inch on shore, to a gun fixed for the purpose, with a view of lessening the strain on the northern anchor, but all to no purpose, for so hard were the gusts of wind from the northward that we found it impossible to secure our ship although the most skilful pilot was employed, and his suggestions *most promptly* attended to.

I recommend a ship's anchoring *close* over to the north shore, and placing *both* bowers so that they would bear with a north *or* N.N.E. wind, which blows *tremendously* hard, and the holding is bad, being composed of loose sand and mud. In this case an anchor should be laid to the southward ready for use. The stream would do very well, as the wind seldom blows home from this quarter.

Supplies are very fair, beef, vegetables, and good water, without landing the casks, obtained at the head of the harbour.

While here several surveys were held on the *Formidable*, and her bottom was examined by one of her crew who volunteered to go down in the diver's dress supplied for the purpose. The result of these surveys caused Sir David Dunn to determine on ordering the ship to be got ready for proceeding to Malta. Many opinions were offered privately on this subject, but subsequent results must have convinced even the *knowing* ones of the propriety of this step.

The weather here from 27th December to 8th of January was one continued gale from N.N.E. to N.N.W., with *tremendous* heavy squalls. Thermometer during the day 48°, and at night falling to 40°, with cold dreary weather.

The town of Mahon appears very dull, and nearly deserted. Our worthy captain who had seen it in bye-gone days must have seen a great difference. About eight thousand persons having left the island for Algiers, and other parts on the African Coast during the last year. There is no trade only in shell flowers made by the females, but this is of little or no consequence.

January 5th shifted our berth off St. George Town to ten fathoms. Towards morning of the 6th it blew a gale at N.b.E. Veered to 110

fathoms, and let go a second anchor, veered to 60 on it, struck topmasts, &c., sheet ready for letting go. I have had many years' experience at sea, and can with safety state that I never knew it blow harder.

While the gale was raging at its greatest fury a man fell overboard, from the fore chains, who could not swim, when James Doran, AB., one of the Captain's gig's crew gallantly jumped overboard to his assistance and succeeded in bringing the poor fellow on board, although quite dead, an old man. This fine fellow who I should always be glad to sail with and to shake by the hand meet him where I may, is a Cumberland man, has been in the ship all the commission, and independent of this affair bears a first-rate character as a good seaman, as well as a sober, peaceable, well conducted man. At the time he jumped overboard the gale was blowing most furiously, and right out of the harbour with a strong tide setting the same way; had he not succeeded in reaching the ship, he must have been carried out to sea, and of course perished.*

January 7th, *Cyclops* returned from Barcelona where she had been sent for some of the *Formidable's* guns as well as to get her rudder, she brought the former, but did not find the rudder.

P.M. committed the body of our late shipmate (the man who fell overboard) to its last resting place.

While it has been blowing furiously with us in the harbour, the *Cylops* was coming from Barcelona, having left 2 P.M. 6th, and had fine *moderate* weather.

Sunday, 8th.—Having made all the necessary arrangements for the *Formidable* and *Cyclops* to follow, we wayed and run out of the harbour and hove to. We were joined by our friends at 5 P.M. made sail south-east, fine weather, and moonlight. At 1h. 30m. A.M. after the moon went down lost sight of our lame friend, she had up to this time been going on remarkably well, although taking a broad shear occasionally, having only a temporary rudder. Losing sight of her she being in such a crippled state, &c., caused much uneasiness, as may be imagined. The *Cyclops* immediately altered course and proceeded in the direction north-west where our friend was last seen, *Vanguard* heaving to. I think I may say every soul on board was wound up to the greatest state of anxiety for the safety of our lame friend. We were doomed to this until the following day at ten o'clock when we had the pleasure of seeing the *Cyclops'* smoke, and shortly afterward our friend the *Formidable*, who made signal nothing serious has happened.

Noon 38·25—7° 5′ 00″ E., dirty stormy weather, during the day we ran ten knots under a close reef. Compared latitude and longitude, all agreeing very nearly. *Formidable* rolling very much and appearing almost unmanageable.

Monday 4 P.M., finding she was keeping a northerly course, made signal,—" Steer S.E.b.E. for the night, I intend going between Cape Bon and Skerki shoal." *Formidable* answers; " I do not consider it

* Sir David Dunn has, with his usual kind warm-heartedness, procured the Medal from the Humane Society, for this fine young fellow; and the officers got up a purse for him.

prudent in my present crippled state to take this channel." *Vanguard* answered,—"Very well, I'll follow you; but pray carry all sail you can with prudence."

8 A.M. strong breezes, steering about E.b.S. to keep company with *Formidable*, moonlight and rolling dreadfully, having only a close reefed main-topsail.

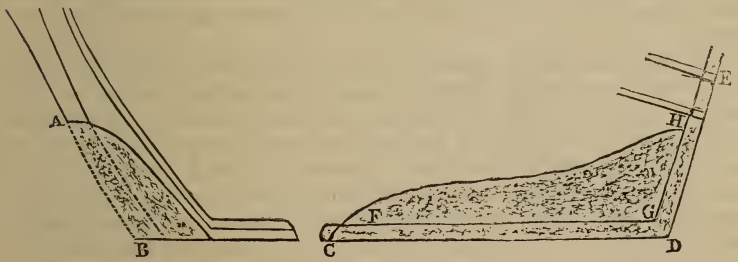
Tuesday morning 10th, have had a dreadful night, *Formidable* says "We have had a rough night, ship has been *quite unmanageble*, but all's well at this time." 38·62—9° 33′ E.

Noon, Tuesday 10th, 38·35—9° 47′ E., weather more moderate, *Cyclops* took our friend in tow, during the night *Vanguard* took the lead and rounded the shoals, &c., *Cyclops* following with *Formidable* in tow, got into Malta harbour on the 12th, much pleased to see our lame friend in such good quarters. She was hove down and thoroughly repaired on the 31st, and is now as good as ever. Her bottom was found in nearly the same state as the diver reported.

Vanguard was ordered to Lisbon after this; while here I measured the aqueduct, which I make as follows:—

	Ft.	In.
Height of grand arch from ground to vertex,	221	2
From vertex of arch to top of ventilation,	33	0
Total height from ground to summit of ventilation,	254	2
Breadth of principal arch,	107	8
" Piers of the arch,	28	0
Thickness of the piers,	23	8

[The following account of the injury sustained by the *Formidable* has been placed in our hands.]



A to B 10 feet—C to D 56 feet—D to E 12 feet, stern-post gone—F to G 30 feet dead wood, G to H 6 feet.—False keel all gone except about 30 feet.

The above rough sketch will convey some idea of the damage the *Formidable* had sustained. She was first hove down on the 31st of January, at 9 A.M., in good style in about thirty-five minutes; the faithful report of the carpenter's mate who went down at Port Mahon, became apparent; in addition to what is shewn above, much of the garboard streak on both sides was gone, but no holes in her bottom, the leakage being between the planking and timbers. When well caulked and let up again the same evening, she made very little water. On the 3rd of February she was hove down again, and remained until the even-

ing of the 4th; down again on the 7th; and finally righted on Saturday the 11th at noon. The dockyard officers deserve great credit for their exertions, and the manner in which the repairs have been executed, as far as they had the means: they had no elm for a keel, and have substituted New Zealand fir. The stern-post is scarfed. Some people think that she is as good and as serviceable as ever; but her bottom is very much shaken, as may be seen by the copper being wrinkled; and the question is agitated, as to whether or not she is hogged,—by the line of copper it is said she always appeared so, but it is now by many considered more so. She is now in a fit state to be sent home, which no doubt is intended as the dockyard have taken out a new sheet cable, and given her a half worn one, &c., and it is reported that she is to complete for *two* months only, the usual orders of the port are to *four*.

Malta, 16th Feb.

Navigation through St. George Channel, *to the westward towards the coast of New Guinea.**

The following islands and reefs were discovered on board the barque Waterwitch, sperm whaler, by Francis John King, on his route to the westward towards Crown island and the coast of New Guinea.

Legelis Shoals—seen in the barque Waterwitch, September 25th, 1842, bearing from the Isle of Man W.b.N. $\frac{1}{2}$ N., distance thirty-six miles, the north-west Cape of New Britain, bearing S.S.W., distance thirty miles—are two shoals bearing north and south from each other; passage 200 yards, with no soundings; through which the ship passed at about 5h. 30m. A.M. By means of several sights taken by two good chronometers, which made Cape St. George three days previous in long. 152° 56′ east, places these shoals in lat. 3° 50′ south, long. 151° 50′ east, being nearly level with the surface of the sea, and cannot be seen until close upon them in consequence of the water at times being very thick.

At 6h. 30m. A.M., steering W. $\frac{1}{2}$ S. by compass, shoal water was discovered from the masthead to be about one half mile a head of the ship; luffed round and backed the main-yard, cleared away the starboard quarter-boat; took a compass, lead, and line, and found this to be a reef dry only at low water, on which I landed and found it to extend east and west, one and a half mile with soundings off the east end from ten, fifteen, twenty-five fathoms, about two or three hundred yards, angling to the north-east, then no soundings. It did not appear on examination to be composed of coral, but of a volcanic eruption. I called it Elizabeth Reef, and by good observations is in lat. 3° 58′ south, long. 151° 30′ 15″ east, by Cape St. George and Goodman Island. Saw another reef extending in a horse-shoe direction S.W. to E.S.E., five miles; this reef breaks very heavy in bad weather; this I called Coop-to-do-Choose Reef, and is estimated to be in lat. 4° 13′ 30″ south, long. 151° 24′ east. Saw another reef, which breaks but little, and appears to be nearly a round patch, of about one mile and a half in

* These remarks appeared a short time ago in the *Naval and Military Gazette.*

circumference; this, and another reef about three miles, bearing W.b.S., is a long reef, with shoal water extending S.W. ½ W. These last reefs I called Father and Son, and are in lat. 3° 55′ 30″ south, long. 151° 10′ east.

Discovered also two sandbanks about three feet above the level of the sea; showed very white, neither tree nor shrub upon them, and could be descried, in clear weather, from the ship's mast-head, fifteen miles, and is estimated, the east bank to be in lat. 4° 32′ south, long. 151° 15′ east; the other bank bearing W.b.S. ½ S. from the east bank, is in lat. 4° 33′ 30″ south, long. 151° 10′ east. These I called Hortons East and West Banks. There appears to be a good and safe passage between all these reefs; I found no current, but a regular tide once every four-and-twenty hours; the ebb-tide appeared to set to the westward, rather stronger than the flood, which I found to set to north-east, one and a half knot per hour.

Gipps Island—Oct. 1st. made land, which was found by good observations to be in lat. 4° 15′ south, long. 149° 16′ 30″ east; is a round sugar-loaf island, about three miles in circumference, and is surrounded by a reef, which, on the eastern side, extends about three miles from the island, forming a very good harbour for small vessels, with a passage open from north-east, two miles wide. This island is well inhabited, and the natives were very civil to the boats who traded with them for cocoa-nuts, yams, and offoolee. There is a boiling spring on a sandy beach on the south-east end of the island, and another on the south-west side, which threw up boiling water at times, upwards of twenty feet. This island I named after his Excellency Sir George Gipps. Found the variation to be 12° 13′ east, and no current.

Albert and Victoria Reefs.—Steering W.S.W., with a brisk gale; 10h. 30m. A.M., reported from the mast-head breakers a-head, bearing south-east and north-west, breaking very heavy. At 10h. 40m. A.M., again breakers reported on the lee bow; steered to go through between the two reefs, bearing north-east from a high island; this reef also broke. These two reefs I took the liberty to call after her most gracious Majesty Queen Victoria and Prince Albert. By means of several sights taken by two good chronometers, places Victoria Reef in lat. 4° 17′ south, long. 148° 10′ east; Prince Albert Reef is in lat. 3° 58′ south, long. 147° 58′ east, according to Cape St. George. These reefs are very dangerous for ships passing through St. George Channel to the westward, as they lie in the track of ships steering to go to the southward of Shelburne Shoal, and the reef on which the Sydney was wrecked in 1806.

Antediluvian Island.—6th, made a round island about two miles in circumference, surrounded by a reef which stretched to the south-east, towards Long Island, on which the Lady Blackwood struck, in 1840, making a passage between the two islands. This island I called Antediluvian Island, and is uninhabited; by good observations is in lat. 5° 45′ south, long. 146° 50′ east. The abovenamed islands and reefs are not layed in Horsburgh's, Norie's, or any charts on board the Waterwitch, or any I have hitherto seen.

Ferriers Bank.—April 25th, at sun-down, being in lat. 23° S., long. 155° 45′ E., blowing fresh from the E.S.E., with a heavy swell from the

southward, barque standing to the southward under moderate sail, to pass to windward off Cato Bank and Reef, at midnight, with the night-glass, I descried Cato Reef, bearing W.S.W. about ten miles. At 12° 30′ A.M. made Ferriers Bank, on which we got soundings in seventeen fathoms—coral and coarse sand. When the lookout on the fore-top-sail-yard reported shoal water and breakers ahead, brailed up the mizen and took in the courses, wore ship and stood to the northward and eastward; at 3 A.M. wore ship and steered for Cato Bank; at daylight Cato Bank bore W.b.S. ½ S., distant twelve miles, which, by means of several sets of sights by two good chronometers (No. 812, made by Charles Harris, London; second chronometer, by Halton and Harris, No. 618), I found to be in lat. 23° 6′ 32″ south, long. 155° 25′ 15″ east, which places Ferrier's Bank eighteen miles S.S.E. ½ E. from the east end of Cato Reef, extending north-east with shoal water, and breaks in bad weather, which proves to me the real existence of this bank, which I never saw before, though I have been several times cruising off the reef, and I am sure must have passed over it when bound towards Torres Straits, in the Westbrook, in 1840, by the bearings of Cato Bank in the morning.

April 26th. At noon made Wreck Reef, which, by good observations, I made the easternmost part to be in lat. 22° 12′ 30″ south, long. 155° 31′ east, differing three miles east of Horsburgh.

May 6th. Six days previous to leaving Bromton Shoals, made the New Hebrides, Espiritu Santo, which by means of several good observations taken on the 7th, 8th, and 9th, close in shore, placed Cape Cumberland in lat. 14° 43′ south, long. 166° 31′ east, placing it twenty-two miles further to the northward and eastward than the position assigned to it in the charts, on board, and the same difference by Chesterfield Bank, and twenty-five miles according to the position of the island of Rotumah, in Norie's charts, by which island the chronometers agreed perfectly, on 3rd June last.

Friendly Island.—13th, made an island; was, by good observations, in lat. 14° 26′ south, long. 167° 59′ east, not laid down in any of the charts, which I supposed at first to be Star Island, which I made afterwards to the eastward, in lat. 14° 20′ south, long. 168° 15′ east, and uninhabited, being nearly a round island, three miles in circumference, with plenty of wood upon it. The former island I named Friendly Island; its extent north and south in ten miles, with a good bay on the west side, which I called Cross-hand Bay, in which there is good anchorage for any vessel not exceeding 200 tons; traded here with the natives, who were very civil, and brought down abundance of cocoa-nuts and yams, in exchange for iron hoop. After which I stood across to Lepor's Island, tacked and stood towards Aurora Island, which, on the 19th May, I found to be, by good observations, in lat. 15° 2′ south, long. 168° 25 east, which is thirty-six miles to the eastward of its position in the charts. The natives here are of a very savage and treacherous nature; they tried to cut the boats off when trading on shore. I cruised among these islands nearly one month; we saw plenty of whales but they were very wild. The weather among these islands I found to be very bad, attended with heavy north-west squalls, which lasted sometimes from six to ten hours. In one of these heavy north-west squalls, at midnight, I

was compelled to back and fill the vessel between Aurora and Lepors Islands, and let her drift to the southward. At daylight Whitsun Island bore E.S.E., distance ten miles, which, by good observation, is in lat. 15° 27′ south, long. 168° 19′ east. This island has a reef running off its north extremity, stretching across towards Aurora Island, which renders this passage unsafe. Between Lepors and Aurora Islands is a good and safe passage for ships of any burthen, if not kept too close to Lepors shore, as a reef was observed stretching a short way off shore to north-east. There are no soundings near any of these islands, until you are very close in shore. During the month of May I found no current among these islands, but in December and January I found a very strong current setting westward.

FRANCIS JOHN KING.

ON COMMANDER HARRIS'S REMARKS ON MOORING SHIPS.

By Lieut. A. Ryder, R.N.

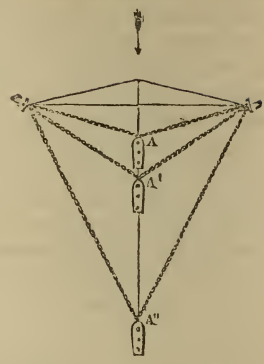
SIR.—I am now tempted to take a greater range than my last, and forward you some remarks on a little work published by Commander Harris, R.N., in which, after giving a long and interesting account of the "Heaving down of the Melville," he concludes with some "Miscellaneous Observations," on the following subjects:—*First*, "On Mooring;" *Secondly*, "On Raking Masts;" and *Thirdly*, "On the Effect of Wind on Sails." In doing which, between you and I, Mr. Editor, I cannot help comparing myself to one of those little half-fledged birds, whose first act, after being ushered into life, is to attack its neighbours or companions. You have no sooner in your kindness broken my shell and introduced me to my elder brothers in your pages, than I assault one who has had the start of me for a considerable period of time, and who is, moreover, by some years my senior in age, and by a number of steps in rank. I approach, therefore, with considerable diffidence the subjects of the following article, feeling how very possible it is that my ideas may be erroneous, nay, from the fact that nobody has attacked the theory promulgated by Commander Harris, how more than probable it is that he is right. I trust, if my remarks have the good fortune to meet his eye, he will attribute any apparently presumptuous positiveness of statement to the necessity of keeping my remarks within certain limits, and remember that, for every occasion that I found it necessary to differ with him, had I accompanied the statement of such a difference with compliments to his talents, &c., the article now, I am afraid long enough to exhaust the patience of most readers, would then have been considerably increased. To commence then—

For the convenience of those who do not possess the book (they should get it the first opportunity) I will transcribe his remarks.

1. "If ships have room to lay at single anchor with chain cables, they are more safe so, than when moored. The following example is given in illustration.

2. " Let A be moored with 75 fathoms S.E. and N.W., and B be at single anchor with the same scope (fig. 1). A gale comes on from S.W., the strain on each of A's cables is double the strain on B's.

Fig. 1.



3. " It blows harder, and B lets go her other bower, and veers to 150 fathoms on the first, and 75 on the second cable. A also veers to 150 fathoms on both cables, but B still keeps her advantage, the strain being only as 88 to 100. It is clear, therefore, that if either ship parts her cable it will be A that will part first.

4. " If A had her mooring swivel on, she could not veer with any advantage, as the strain on that part of the cable between the swivel and the anchor must remain constant. For this reason it is obvious that moorings should not be laid down across the prevailing winds.

Fig. 2.

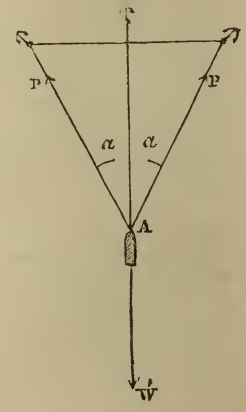
5. " The above may be shewn practically by stretching a small line between two points, and suspending a weight in the middle, see what weight it will bear and afterwards try what the same will bear vertically; the latter will be the ship at single anchor, the former the one moored.

6. " Mathematically speaking, the strain on a single cable ahead will be less than those which moor the ship in the proportion of 2 nat. cos. of $\frac{1}{2}$ the angle between the anchor : 1."

For the sake of clearness I have numbered the paragraphs; we will commence with No. 6, which gives correctly the equation connecting the strains on the cables, and investigate its truth.

Let P represent the amount of strain on each of the mooring cables, and W the amount of strain on the single cable ahead, a the angle included between the mooring cables and the direction of the wind. For the sake of comparing the strains imagine at A, (the ship that is moored,) a strain $W' = W$ applied, in the opposite direction to which it was applied to the ship riding at single anchor, and equating that part of the strain acting along the axis of x, we shall find that

Fig. 3.



$$W = 2\ P \cos.\ a, \text{ or } \frac{W}{P} = 2 \cos\ a.$$

The relation, therefore, existing between the strain on the cables of the ship that is moored, and the ship at single anchor, depends on the angle subtended at the ship that is moored between the anchors she is riding by. Now let us read over again his second paragraph—" Let A be moored, &c. the strain on each of A's cables is double the strain on B's."

Commander Harris gives the comparative strain on the cables without any reference to the angle between the anchors, departing therefore from the equation by which he professes to be guided, for in his statement of the position of A's anchors, he gives us no clue to the angle subtended between them. By his figure I should suppose the ship was *not* taut moored. If, however, she is meant to be taut moored, our equation will at once give us the relation beween the strains.

$$\text{Equation} \quad W = 2\,P \cos. a$$
$$\text{Therefore} \quad P = \frac{W}{2 \cos. a}$$
$$\text{But in this case } a = 90 \quad \cos. \quad a = o$$
$$P = \frac{W}{o} = a$$

Or, the strain on A's cables would be infinite (not twice that on B's) showing how dangerous it would be to keep a ship taut moored in a gale of wind. Commander Harris's *principle* is correct therefore, when the ship is taut moored, (though his statement with regard to the strains is erroneous,) and by examining our equation we shall at once see when his theory even ceases to be correct.

Resuming our equation $W = 2\,P \cos. a$.

According to Commander Harris, W would never $= P$, or the strain on a single cable ahead would always be less than on one of two mooring cables. If this were correct it would result that when in this equation P was made equal to W, we should find some impossible value for a. On the contrary, however, when $W = P \cos. a = \frac{1}{2}$ or $a = 60°$. When, therefore, $a = 60$, or the angle included between the cables $= 120°$, P would equal W, a the strain on the three cables would be equal to one another, and the ship that was moored would be as safe as the ship at single anchor. The more the cables are veered, the less a becomes, and the less becomes W in proportion to P. Thus far then Commander Harris is partly wrong and partly right.

In the third paragraph Commander Harris abandons his position of single anchor, and lets go a second. How he arrives at the proportion of 88 to 100, I certainly (as he does not enlighten us with any reasons for it) cannot conceive. The equation on which the relation between the strains depends is misapplied in the second paragraph, and without evidence to the contrary we may conclude that it is so also in the third.

In the fourth paragraph he says, "if A had her mooring swivel she could not veer with any advantage."

She could not veer with the same advantage that she could if the swivel was off, but that advantage would attend her veering is evident from this.

In that after veering, the angle β decreases to β', and although the strain on the cable (the carrying away strain) remains the same, yet the tripping strain S sin. a (if we call the direct strain S) is evidently decreased; the anchors will therefore hold on longer, and advantage *will* attend veering, &c.

Whether moorings should be laid down across the prevailing winds, or, not depends in my opinion as far as strains are concerned upon

whether the bridle is taut from one anchor to the other. If taut the strain on the bridle is greater than it would be on chains of the same size leading to one of the anchors only. If, therefore, the bridle is taut, the anchors had better be in the same line as the prevailing winds, but if the bridle is so slack that when a ship is riding by it the angle is less than 120°, the critical angle, then the moorings should be laid down across the prevailing winds.*

The fifth paragraph has been met by the preceding remarks:—Let the line be quite taut when the weight is hung on it, and it will carry away before the vertical line would; but let it be so slack that the angle is less than the critical angle, and the vertical line will be carried away soonest. Whether a ship riding by two anchors ahead in a gale of wind, one being 75 fathoms from the other, and the cable to the most distant veered to the clinch, is more safely circumstanced than one moored in the common way, be true or not, only affects Commander H's. position to this extent, that if true, it might be prudent to remain at single anchor when in expectation of a gale of wind, to have it in power to assume this, the more safe ultimate position; but it does in no way prove that, lying at single anchor is in itself safer than being moored.

It is worth recollecting that, if after riding with a considerable scope of cable on the first anchor, a second is dropped under foot, andboth cables veered upon, that if the gale be variable in direction the smallness of the radius of the circle which the near cable obliges the ship to describe brings immediately on that cable and anchor, by destroying the support from the other, a considerable increase of strain.

If, Sir, you think these remarks worth a place in your pages, I will send you others on Commander Harris's next subject, viz., "Raking Masts," trusting that Commander Harris or some one of your readers, will, if my arguments are erroneous, take the trouble to set me right.

I remain, Sir, &c.,

A. RYDER,

To the Editor, &c. *Lieutenant R.N.*

THE PEARL BANK,—RIVER PLATE.†

HAVING reason to believe that a shoal not laid down in the Admiralty charts existed off the south-west extremity of the Ortiz Bank, in the neighbourhood of the Pilot Schooner, I despatched to that quarter, at daylight of the 11th January, 1842, the pinnace and cutter of the *Pearl*, under the command of the Acting-Master, with orders to ascertain its position, and carefully survey it, making the Pilot Schooner, the basis of his operations and place of refuge and rendezvous.

* The reader will of course remember that one of the chief advantages of mooring is to give ships a stationary point to swing round without any fear of fouling anchors, &c.

† We have received the annexed account of a service rendered to the safe navigation of the River Plate, from Captain C. C. Frankland, R.N., while in command of H.M.S. Pearl, by Mr. Symonds, master of the ship, who meritoriously succeeded in surveying a dangerous bank at the expense of considerable personal risk and privation.—ED.

I did not anticipate that this service would occupy more than five or six days; but, on the forenoon of the 17th a terrible gale, such as has not been known by the oldest inhabitant of Monte Video, at this period of the year, sprang up from the south-east, and blew with inconceivable violence until the morning of the 20th.

The *Pearl* rode it out in safety with 60 fathoms on each bower, and topmasts down, bringing both anchors ahead. She behaved to admiration; all the foreign men-of-war and national vessels drove very much, especially the French corvette Arethusa, which vessel parted two bower chains, and the Brazilian corvette Uniao, which brought up within a few cables' length of the shore, under the Mount. The Cuirassier had four anchors down, and veered her cables to the clinch; four vessels went on shore in the harbour, and seven were wrecked between Monte Video and Cape St. Mary.

Our anxiety for the fate of the boats was painful to a degree, for with all our reliance on the skill and courage of their officers and crews, the excellence and good state of the boats, and the precautions taken to provide against every contingency, yet the tremendous sea which ran for three days, and the irresistible fury of the gale occasioned considerable alarm for their safety; this, too, was increased on finding they had not been seen by the *Partridge*, nor by the pilot vessel, which had driven twelve miles to the northward of her anchorage; nor by the river packet Rosa. Our last hope was, that they might have borne up for the Arroyo of Atalaya, for Ensenada, or even Buenos Ayres, and that the crews might have been saved, even supposing the boats to have swamped upon the Western coast. With a view, therefore, of rescuing them from their unfortunate condition, a small decked schooner, fit for running into the creeks and islets upon both shores of the river was hired, a crew of five men put into her, commanded by Mr. Fellows, midshipman, and Mr. J. Daily, pilot, volunteers for the service, provisioned and stored for ten days for themselves and the boats' crews; a carpenter with spare plank and tools to repair the boats in case of their requiring such assistance, and she was despatched with directions to proceed immediately to the pilot vessel for intelligence, and to look into Atalaya, Ensenada, Buenos Ayres, Colonia, and Santa Lucea for the absent men.

The day after the schooner left us we had the inexpressible satisfaction of discovering, over the low land of the Punta de las Yeguas, the head of the cutter's foresail, and in about an hour afterwards the peak of the pinnace's mainsail.

Before noon the cutter was alongside of the *Pearl*, and by one o'clock the pinnace also, and thus by the mercy of God two open boats had been saved from that destruction which overwhelmed so many vessels in the River Plate. The officers and crews have returned in safety and in perfect health.

They have saved my chronometer, the sextant, compasses, arms, ammunition, and have only lost such stores as it was necessary to throw overboard for the safety of the boats.

They have, moreover, found out and accurately laid down the shoal they were sent to discover. Mr. Symonds gave the following particulars of his mission :—

We proceeded with the pinnace and cutter to the channel between Point Indio and the tail of the Ortiz Bank to ascertain the exact situation of a shoal, said to exist nearly in the fairway, and which is not laid down in the Admiralty charts.

The boats arrived alongside the pilot schooner, Condor, at half-past five the same evening, their crews remaining on board her that night, and receiving every possible assistance that could be rendered.

On Wednesday, the 12th, we continued with the boats towards Point Indio, and when in a position to see both this point and the schooner distinctly, a base line was found by their true bearings and distance; the latitude and longitude of the Condor being deduced from observations taken on board her the next day; her position being at that time about a cable's length W.N.W. of her moorings; the bearing and distance of her beacon were also ascertained.

At noon on Thursday the 13th, having passed the previous night on board the Condor, we proceeded to the supposed position of the bank; viz. to north-west by compass of the light vessel, sounding across the channel, but without success. We passed this night in the boats, and the next night having to push our stations out of sight of the light vessel, the pinnace was kept at anchor, and made use of large casks rigged with staff and flag, shot for ballast, answering for anchor and cable. Owing to the short sea, and consequent unsteadiness of the boats, no use could be made of the azimuth compass; but the true bearings of the stations from each other are calculated, by means of their angular distances from the sun. The distances were carefully measured by the ground log.

We also passed Friday night in the boats, a strong south-east breeze blowing, with a good deal of sea on; we stood more to the northward the next day, and reached the wreck on the Ortiz, the latitude of which was observed at noon, and by its difference with the latitude of the pilot boat, corrected the distances which had been measured by log. Late in the evening of this our last day, on returning to the Condor, we shoaled our water on a bank detached from the Ortiz, which I have no doubt is the bank in question; and most probably the identical "Middle Ground," of the existence of which Capt. Heywood was so doubtful. The sun setting prevented any further examination, but with most of the soundings it is in the plan constructed by us.

Mr J. J. Onslow, vol. 1st class, rendered valuable assistance in measuring angles. We remained on board the Condor the whole of Sunday drying the people's clothes, and on Monday morning at 7 A.M., we made sail for Monte Video. Every kindness was shown us by the pilots and crew of the light vessel, especially by Mr. Fitton, pilot, in temporary command of her, when we first arrived.

The circumstances which retarded the return of the boats until the yesterday, were as follows:—About an hour and a half after leaving the light vessel, it came on to blow hard from the S.S.E.; at this time the light vessel bore S.W. $\frac{1}{2}$ W. by compass, seven miles. The sea soon got up and the boats were kept running free, making an E.b.N. $\frac{1}{2}$ N. course, and sometimes to leeward of E.N.E. The tide was flowing, but we anticipated a current running to the eastward when we should arrive at the northern side. During the afternoon the weather became

thick and the squalls furious. We made out the land about four o'clock, a high bluff point to the north-west, when the boats suddenly got into a very heavy sea, which nearly filled the cutter, obliging her to anchor. We found shoal water here, and being not more than two miles off the land, on which (the mist partially clearing away) we could see the surf, and thought it best to anchor for the night, but first stood more to the westward into smoother water, whither the cutter followed as soon as baled out.

We lay exposed to a heavy sea all night, and the boats were only saved from swamping by the precaution of being hooded over, the sides of the hoods being stopped down outside the gunwales, thus serving to carry off the sea, which continually broke over them. Previous to the evening becoming dark we judged it expedient to lighten the boat, and a fish kettle, an empty hogshead fitted as a buoy with staff and flag, an empty half hogshead, a hanging stove, and about 1 cwt. of coals, were thrown overboard. We had lost a similar cask to the first mentioned one, fitted as a buoy, with its anchor and cable, by its drifting during the breeze of Friday night.

On Tuesday morning both the boats wayed, but the cutter was compelled to come to again. This day it blew very hard, and towards night the pinnace parted one of her anchors, and had now but one anchor and cable to depend on, which, fortunately were good ones, so that she held out during the night. This day (Tuesday) we could see that the land consisted of a range of cliffs.

On Wednesday morning there was not quite so much sea; the wind being a little more from the southward the boats wayed, and after running to the eastward seven or eight miles, descried the entrance to the river Santa Lucea, on the lee bank of which we worked up, and came to in smooth water opposite the residence of Señor Bernardino Mubrigates, who supplied us with wine and food, shelter and accommodation, the people having been since Monday without sustenance.

The gale broke on Thursday evening, and on Friday the boats succeeded in regaining the ship.

Voyage from Hong Kong to Suez by H. C. S. Akbar.

(Tonnage 1143 O.M. with Engines of 350 Horse-Power.)

157, *Leadenhall Street, Nov. 20th*, 1843.

Sir.—The accompanying abstract of the H. C. steam-ship Akbar's log, exhibiting that vessels run *during the adverse monsoon* from Hong Kong to Suez direct, in less than forty-six complete days, (stoppages included) renders all further controversy, *as to the most eligible route* for the future transit of the Chinese correspondence unnecessary, and cannot fail to afford your Nautical readers considerable gratification.

I am, Sir, &c.,

To the Editor, &c. George Coleman.

Route of the Akbar steamer from Hong-Kong to Suez direct in forty-six days, stoppages included; viz.: left Hong-Kong August 1st, arrived at Suez, 3 P.M. September 16th, 1843.

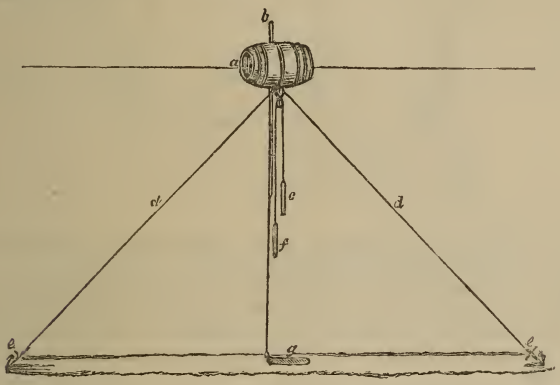
Date.	Course.	Dist.	Latitude.	Longitude	Currents.	Winds,
1843						
Aug	°	miles.	° ′ ″	° ′ ″		
1			22 1 45 N.	113 34 0 E.	—	S.W.
2	S. 44 W.	178	19 28	112 8 0	N. 40° E. 20′	Southerly
3	S. 34 W.	189	16 56 30	110 8 40	N. 58 W. 16	
4	S. ½ W.	164	16 9	109 49	lght drain to N.W.	15 to 18 mls
5	S.	156	no observation		northd & eastwd 14	to 16 miles
6	S. 13 W.	114	9 53	109 38	N. 74° E. 48′	sight Sapata
7	S. 44 W.	110	8 35	108 7	N. 30 E. 61	
8	S. 37 W.	164	6 50	106 39	N. 23 E. 42	
9	S. 34 W.	170	no observation		N. 25 E. 34	
10	S. 31 W.	165	1 46 15		N. 32′	
11	—		2 21			calm at
12						Intervals
13						Fine and
14	At Penang					pleasant
15						N. E.
16	—					Calm
17						
18	S. 55 W.	160	4 16		N. 8° W. 28′	
19	S. 51 W.	172	2 29	90 44	N. 11 E. 22 miles	
20	S. 55 W.	182	0 46	88 19	N. 9 W. 30′	
21	S. 13 W.	198	2 22 S.	87 39	E. 26	
22	S. 41 W.	213	5 28	85 2	E. 10 miles	
23	W.	220	5 1	81 30	E. 10 "	
24	W. 3 N.	210	4 56	78 5	E. 12 "	
25	W. 6 N.	201	4 34	74 51	none	
26	N. 88 W.	182	4 28	71 41	E. 20′	
27	W. 3 S.	192	4 34	68 23		
28	W. 2 N.	190	4 19	65 33		
29	W. 8 N.	204	3 50	62 20	E. 15 miles	
30	W. 6 N.	140	3 36	59 54		
31	W. 2 N.	181	3 30	56 54		
Sept						
1	W. 9 N.	201	2 38	53 38		
2	W. 20 N.	175	2 1	50 57		
3	N. 7 W.	215	1 28 N.	50 26		
4	N. 4 W.	226	5 17	50 11		
5	N. 15 E.	289	9 50	51 43	S.W. 22 miles	
6	W.N.W.	225	no observation		C. St. Peters S.	43° W.
7	N. 5 W.	270	12 1	45 39		
8						
9	W. 17 S.	59	12 29	44 7		
10	Variable	202	14 51	42 17	S. 37° W. 24′	N.N.W.
11	N. 33	225	no observation			
12	N. 26 W.	205	20 33	38 55	S. 1 E. 36′	
13	N. 27 W.	176	22 49	37 23	S.S.E. ½ E. 30	
14	N. 28 W.	200	25 45	36		N.N.W.
15	N. 49 W.	172	27 41	33 56		
16	N.N.W.	156				

Aug. 1. Left Hong-Kong at 4h. 30m. A.M.; received the mail in Macao roads at 9h. 50m.; and at 10 A.M. left Macao roads.

Aug. 10th. Arrived at Singapore 6h. 30m. P.M., left Singapore 8h. P.M.
11th. Running through the Strait of Malacca, and arrived at Penang at 5 P.M. on the 12th.
14th. Coaling,—left on the evening of the 15th at 7 P.M.
17th. Running to the westward, and rounded Acheen Head at 1 P.M.
Sept. 7th. Arrived at Aden at 6 P.M.
8th. Coaling at Aden, left on the morning of the 9th at 5h. 30m. A.M.
15th. Fresh breezes with a very high sea.
16th. At noon Suez N. 25 miles, arrived at Suez 2h. 55m. P.M.

Plan of a Tide Pole.

For obtaining the rise and fall of the tides on extensive banks, when no opportunity offers of obtaining it by the shore.—*By Commander E. Barnett, R.N., H.M.S. Thunder.*



a	A 12 gallon barrico.	*e*	Boats' anchors,
b	A graduated pole to inches and parts.	*f*	Weights according to the strength of the tide.
c	A deep-sea lead or two.		
d	Moorings.	*g*	Pig of ballast.

Explanation.—Bung up one of the boats' large barricos, and a little on one side of the middle, fix a copper tube, air-tight through it, to receive a graduated pole; and strap a three-fold block under the middle of it.

Provide a pig of ballast, a deep sea lead, and a length of 2-inch rope; bend on the pig of ballast to the pole, and at such a distance from the pig that the top of the pole shall be at least three feet above the barrico; reeve the other end of the rope through the block, put the pole through the cask, bend on a deep sea lead, ease it down, *and in still water* the weight will preserve the verticallity of the pole, and the barrico travelling up and down the pole, will shew the rise and fall of the tide.

To preserve the verticallity of the pole in a stream of tide, two anchors must be used, and as the barrico will be riding by only one anchor at a time a single weight will be sufficient for both cables, which will keep them taut as the tide falls.

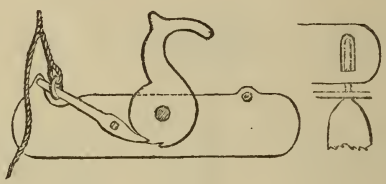
The Life Buoy at Sea.

Sir.—Immense as are the benefits that the inventor of the life-buoy has conferred on seamen, I fear that there are few in the service who have not witnessed delay, and consequent loss, through the wrong trigger line being pulled, and the buoy let go at night without being fired, or fired in the daytime without being let go; and it frequently happens that notwithstanding every precaution, the very man who is placed in charge of the buoy is unable to tell at a moment, which trigger he should pull first.

There are doubtless many methods of remedying this, but not having seen any, I venture to lay before you the simplest form that I can conceive, hoping that should you touch on the point in your valuable work, it may bring to light others of greater merit.

I am, &c.,

A Lieutenant, r.n.



The trigger to be placed as in the figure, and to admit of rising to such a height that the ring may be released when the lock is discharged.

The ring to be attached to the buoy line by a spring lock, as in the figure, or the trigger line may be connected within reach of the taffrail, for the convenience of detaching in the daytime, but the lines must be so fitted, that when connected the buoy line may hang sufficiently slack to allow the lock to be discharged first.

The main spring, &c., have been omitted in the figure for the sake of clearness. As a further improvement I should recommend a percussion lock, the fuze being tapered off to a small detonating tube, similar to those once used in fowling pieces, it would never be liable to be injured by damp.

Great Circle Sailing.

At Sea, Sept. 23rd, 1843.

Sir.—Last year in going from India to Valparaiso, I wished to lay down the arc of a great circle (on a Mercator's chart,) between lat. 51° S., long. 140° W., and lat. 34° S., long. 75° W.

I followed Lieut. Raper's instructions, but after finding the course, dist. and vertex, and point of Max. Sep, the two last named from the *lesser* lat., to test the calculation I worked them again from the other extreme of the arc. The position of vertex and the lat. of Max. Sep. came out the same as before, but the long. of M.S. different. This puzzled me for some time, as in consequence of no limitation being given

in the rule, I expected it was immaterial which end was worked from. Whether this is owing to an error of the press, or to a misapprehension on my part, I am unable to say.

It certainly appears to me that if the arc has a vertex, Lieut. Raper's rule as it appears in his book is limited to working from the *lesser* lat.

I have however hit on a modification of the precept in question (2nd of par. 249) which has in every case that I have tried, given the same results working from either end of the arc. Whether it is correct or not, I cannot decide. A few lines in explanation would confer a favour on many who like me, have not sufficient mathematical knowledge to judge for themselves.

I am, Sir, &c.,

J. G.

The course by Mercator is 70° 17′, the course on the circle from lat. 51° is N. 83° 57′ E., from lat 34° is S. 49° 1′ W. lat. of Max. Sep. 48° 20′.

Course	49° 1′	colat.	56° 00′	79	22′	cot.	9.2736
Mer. Sup.	109 43		41 40	48	50	sec.	0.1816
Sum.	158 44	Sum.	97 40	7	10	cos.	9.9966
Half	79 22	Diff.	14 20	15	48	tang.	9.4518
					2		
		½ Sum.	48 50				
		½ Diff.	7 10	31	36		
				75	00		
				106	36	long. required.	

Working from the other end would be, following Raper's rule,

Course	83° 57′	colat.	41° 40′	96°	50′	cot.	9.0786
Mer. Sup.	109 43		39 00	40	20	sec.	1179
Sum.	193 40	Sum.	80 40	1	20	cos.	9.9999
Half	96 50	Diff.	2 40	8	56	tang.	9.1964
					2		
		½ Sum.	40 20				
		½ Diff.	1 20	17	52		
				140			
				122	8	instead of 106° 3′	

RULE AS ALTERED.—For the longitude ; in north latitude reckon the course on the great circle from north, and the Mercator's course from south.

In south latitude reckon the great circle course from south, and the Mercator's course from north.

Add together the two courses so reckoned. Half the sum and proceed as directed in the Book.

Course	83° 57′	77°	7′	cot.	9.3593
Mer.	70 17	40	20	sec.	1179
		1	20	cos.	9.9999
	154 14				
		16	42	tang.	9.4770
Half	77 7		2		
		33	24		
		140	00		
		106	36	the same as before.	

[On the receipt of this letter we referred it at once to Mr. Raper, who gives the following answer.]

The rule No. 249 paragraph (2) p. 76, of the 1st edition, or p. 85, 2nd edition, quoted by J. G. is true when the place worked from is in the *greater colatitude*, (that is the *lesser lat*, when the two places are on the same side of the equator); and as this condition is not expressed, the rule is defective in those cases in which each course on the great circle (reckoned from the N. in N. lat., and S. in S. lat.,) is less than 90°, that is, when there is a vertex, as in the example given, by your correspondent.

The amendment which he proposes, namely, by reckoning the Mercator's course from the opposite pole, meets the defect completely, and therefore generalizes rule.

I should, however, prefer the following precept. "When the place worked from is in the lesser colat, add (to the course on the great circle) the course by Mercator; when the place is in the greater colat, add the supplement of this course." Take half the sum, &c.

This precept seems to me less liable to mistake: thus suppose the Mercator's course from the place worked from in N. lat. is N. 58° E., the course reckoned the other way is S. 58° W., and I think that if the computer has not his attention properly alive at the moment, he may take this course instead of S. 122° E., whereas he cannot mistake 58° for the *supplement* of 58°. Also, as the colats. must have been already used in finding the courses by No. 244, he can have no hesitation as to which of them is the greater. The preference, however, in such cases depends, a good deal, upon the habits of the computer.

Though it answers but little purpose to apologise for what we cannot help, I of course regret the loss of time and labour which the defect of this rule has cost J. G., and probably many others also, whose intelligence might not so readily have suggested the means of getting out of the embarrassment. It is, however, only by working out the cases as they present themselves in practice at sea, that the adaptation of rules for general service can be definitively established; and it gives me great satisfaction to find, from the letter of your correspondent, to whom I am much indebted for his correction, as well as from other sources, that I have so far been successful in my endeavour to call the attention of practical seamen to the important considerations which the properties of great circle sailing bring into view.

Your obedient servant,

H. Raper.

* The only correction which appears, at present, necessary to the rule No. 249 (2), is to add the condition that "the place worked from must be that in the greater colatitude," and this is inserted in the errata accordingly.

On the Damage which has occurred in the British Navy by Lightning, *with an account of the attendant phenomena, abstracted from the Official Journals of the respective Ships, and from other authentic sources of information.—By W. S. Harris, F.R.S., &c.*.

(Continued from p. 809, vol. for 1843.)

Errata.

In No. 6, for June, p. 394, for Albion 74, *read* Albacore, 20, and *for* 1799, *read* 1798.

In No. 8. for August, p. 539, Hibernia, 120, *for* August 2nd *read* September 2nd.

Remark.—The particulars under Albion, 74, p. 394, given on the authority of Capt. T. White, R.N., apply to the preceding case of the Albacore, and which by an error in transcribing the original manuscript had been written Albion. The statement of the phenomena by Capt. White, is highly interesting and important—he says, " Whilst sitting in my cabin, between four and five in the afternoon, a sudden light glared round the main-mast attended by a tremendous crash. It was raining very hard. I ran on deck, and found the main-mast shivered by lightning, the top-mast and top-gallant-masts totally destroyed, and the main-sail on fire which had been furled in consequence of the weather. The main-mast was rent down to the quarter deck, where the iron pump winches were disposed crosswise, below these were some turkeys in a coop, but they did not sustain any injury."

There can be little doubt but that in this case the pump gear transmitted the great body of the charge to the well, and so on by the metallic bolts through the keel and keelson to the sea, without further damage to the ship. A man who was standing between the main-mast and one of the guns received a severe shock.

Addenda.

With the above correction all the cases hitherto detailed, may be considered as circumstantially verified by the Official Journals of the respective ships or similar documents existing in H.M. Dock-yards, and they furnish striking and very practical illustrations of the effects of lightning, and the phenomena of thunderstorms at sea. We have now to notice some additional cases which have undergone a similar investigation since the preceding went to the press.

Africaine, 36.

1803. August 1st, North Sea, Gravesant Steeple, S.E.b.E., four leagues; P.M. moderate and clear; 5h. heard the report of several guns; 7h. struck by lightning, which shivered the fore-mast, fore-top-mast, and fore-top-sail-yard. David Swords was struck dead off the fore-top-gallant-yard, and several others were wounded.

The wind on the previous day had been from W.N.W., light breezes. On the succeeding day, August 1st, it became variable; and a thunderstorm appears to have occurred in the evening of a summer's day; on the next day the wind veered to south-west.

The ship was struck whilst furling top-gallant-sails in a thunder-squall; one seaman was cut in two by the discharge, the others were paralyzed. The discharge appears to have gone right down the masts,

shivering and splintering them in its course; at the deck it fell on some cases of shot stowed abaft the mast, and taking a direction along the booms went out of the ship in various places; a great portion out of the cabin windows. All the watch on deck were more or less affected by the shock, and from the alarm of fire they swamped the fore-magazine.

Further particulars by Capt. T. W. Nicholls, R.N.

Ariadne, 28.

1831. December 29th, at Bermuda; heavy squalls with thunder and lightning. The electrical discharge fell on the main-top-mast and main-mast, and damaged them both.

Wind on the 24th E.N.E., and fine; 25th south-west, moderate and cloudy; 26th and 27th westerly; 28th south, with light airs and fine, A.M. but cloudy with fresh breezes P.M.; midnight heavy squalls with thunder and lightning; 29th ditto weather, 12h. 10m. A.M. ship struck by lightning; 4h. P.M., moderate; 30th, moderate and fine, wind S. to S.S.W.

On examination the top-mast was found to have been completely ruined, and the main-mast so much damaged that it was obliged to be taken out, and a new mast substituted.

Bulwark, 74.

1815. May 9th, Bermuda, A.M. 2h. 20m. the ship was struck with lightning. Observed the main-top-sail-yard on fire, beat to quarters; 4h. 15m. succeeded in extinguishing the flames by wet blankets; sent the yard on shore with decayed stores.

Wind on the previous day west, moderate breezes, with thunder and lightning; 9h. A.M. N.E. and north, after which a shift to the south; 10h. S.S.W. moderate and fine.

It appears that the mats on the top-sail-yard burned vividly, and that the fire extended into the main-top. It was with difficulty suppressed after two hours labour.

Curlew, 18.

1821. May 15th, Trincomalee Harbour; A.M. wind W.S.W. fresh breezes and fine; P.M. wind variable, fresh and fine; 4h. heavy squall with rain, an east wind shifting in all directions, with violent thunder and lightning; 4h. 30m. the lightning struck the fore-top-gallant-mast, and carried it away; fore-top-mast considerably damaged, and the fore-mast much shook; 5h. 30m. cleared the wreck.

The winds on the previous days had varied from S.S.E. to W.S.W. fresh breezes and fine; it blew about in squalls on the afternoon of the 15th, and then became westerly, varying between W.S.W. and S.W., moderate and cloudy.

Egeria, 20.

1817. April 23rd, lat. 41° 30′ N., long. 60° W., on the passage to

Halifax. 1h. 20m. P.M. shortened sail to a squall, the wind flying round in all directions; 4h. 15m. lightning struck the heel of the main-top-gallant-mast and passed through the foot of the main-top-sail, after which it shattered the larboard belt of the main-mast, tore away the front paunch, and burst open four of the clasp hoops; it ripped up the coat of the main-mast and severely damaged the larboard chain pump; the main-top-gallant-sail also was much torn and burned; on unlashing the sail, the yard was found completely shivered.

The electrical discharge exploded on the main deck with a concussion resembling that of the firing several of the main deck guns. Many men were knocked down on the deck.

The weather on the previous days had been unsettled; on the22nd, strong gales and squalls from the north-west; 23rd variable, wind A.M. north-west; P.M. light airs and extremely variable; at 12h. 15m. a breeze sprang up from south-east with threatning sky; at 1h. 20m. they shortened sail; at 3h. 35m. the sky looked very black to the north-west, the wind flying about in all directions, with forked lightning and thunder; at 4h. the lightning approached the ship, all the topsails were then clued up and the men ordered down from aloft; 4h. 15m. ship struck by lightning; at 5h, 30m. the wind flew round to the north-west with increased violence, after which the lightning abated; at 6h. strong gales and squally.

On the next day 24th, A.M. squally from north-west; the wind veered to the south in the latter part of the day.

Hind, 20.

1800. May 20th, moored in Salt Bay Sound, New Providence; 10 A.M. heavy lightning and thunder with rain; 10h. 10m. received a violent shock of thunder and lightning, which struck the main-top-gallant truck set fire to the main-top-mast head, and splintered the main-top-gallant-mast and main-top-mast and main-mast. It severely damaged the rigging and rendered the main-mast quite useless. The fire proceeded down the pumps, where it became extinguished.

Wind on the 19th S.E.b.S.; 20th south-east, with heavy thunder and lightning; after which on the 21st the wind flew into north-west, light breezes and cloudy.

The ship had another main-mast at New Providence. The log of the 28th records hard rain with thunder and lightning; and says, " 7 A.M. observed the fore-top-mast and top-gallant-mast of the ship Rosario one of the convoy, much shattered by the lightning.

Isis, 36.

1777. August 24th, Howell's Point, at anchor, lat. 39° 26′ N.; moderate and fine A.M.; P.M., squally with thunder, lightning, and heavy rain; 8h. 30m. a flash of lightning struck the main-top-gallant-mast, shivered it and the top-mast in pieces, from the head to the heel, split several pieces out of the main-mast, and burned one of the top-mast shrouds in two; 5h. A.M. employed about the wreck.

The wind on the 23rd, had been from S.W. moderate and fine, but

on the 24th it flew into the north-east in the afternoon, after becoming variable, 25th, variable wind, moderate and fine.

The ship had charge of a convoy, there had been much thunder, and lightning some time before, so that on the 18th they were obliged to take the Henry, transport in tow, in consequence of her main-mast having been shivered, and on the 24th another of the transports called The Three Sisters, appears to have been disabled, together with the frigate. The winds in all these periods were unsettled all round the compass with heavy rain.

N.B.—This case although one of an old date, is of an extremely interesting character, and has hence been inserted.

Pomone, 44.

1811. November 13th, Tavalaro, north thirty-nine leagues, west thirty-three leagues; A.M. strong gales and squally, wind west; P.M. W.b.N., ditto weather, after which thunder, lightning, and rain; 9h. 30m. the ship was struck by lightning, which fell on the fore and main masts; burnt the main-royal all in pieces; killed Robert White, seaman, and wounded six more; midnight strong gales and squally, wind north-west.

Wind on the preceding day variable from S.S.W. to W.; on the 14th, after the lightning, it went back to the north and N.b.E., with strong gales.

The log does not record the amount of damage sustained by the spars.

Primrose, 18.

1828. November 5th, Sierra Leone; A.M. light breezes and cloudy; 4h. ditto weather, wind north, inclining to east; 7h. 30m. heavy squall with rain and lightning; one flash struck the main truck and shivered the top-gallant-mast and top-mast, and knocked down the serjeant of marines.

The winds had been variable and calm on the previous days, from S.E. to S.W.; on the 4th easterly; on the 5th north, after the lightning variable, then south-east; on the succeeding days light airs and variable with calms; after which it went back to north-east on the 8th, and from this to N.W. and W.

Primrose, 18.

1829. March 25th, off Cape Mesurado, coast of Africa; A.M. light airs and cloudy with lightning and thunder; 3 A.M. the lightning struck the ship and shivered the head of main-mast, main-top-mast, and top-gallant-masts; 5h. 30m. main-top-mast and top-gallant-masts went over the side in several pieces. People employed in clearing the wreck. P.M. found that the lightning had considerably damaged the main-top-sail sheet bitts, and combing of main hatchway; employed fishing main-mast. The mizen-top-mast appears also to have been damaged by the lightning, as the mizen-mast was unrigged in consequence, and a jury mizen-top-mast set up. They were for some days obliged to add additional fishes to main-mast.

Winds on previous days had been from the north-west; on the 24th it became variable and flew in to E.N.E. and E. on the 25th and 26th after the lightning, variable and calm; then north-west and north-east, variable and calm; after which, on the 28th, west and north-west, light airs with thunder and lightning at midnight.

Redpole, 10.

1822. October 18th, at Corfu; A.M. wind south, fresh breezes and squally with heavy peals of thunder and lightning; 4h. the lightning struck and shivered the main-top-gallant-mast.

This vessel was struck in the same storm with the Chanticleer. (See Chanticleer.)

The wind on the 14th, 15th, and 16th, light and variable, N.N.W., W., and W.S.W.; 17th, A.M. W., after which it shifted to S.E. and S.S.E.; 18th, S.; on the 20th it flew back to N.W., fresh breezes and squally; after which S.E. to E.; on the 22nd and 23rd light airs and fine weather.

Renard, 6.

1834. November 4th, St. Thomas, West Indies; P.M. squally with heavy rain and lightning; 7h. 45m. the ship was struck by lightning about the foremast.

5th A.M., daylight, found that the lightning had split the fore-royal and top-gallant-masts, the head and heel of fore-top-mast, the fore-top-gallant cap, fore trussel-tree, fore-try-sail-mast, and fused the copper on fore-mast; truck on mast-head split in pieces.

Wind on the 2nd, S.E. to S.S.E., moderate and fine; 3rd A.M. moderate and cloudy; wind variable to south and S.b.E.; P.M. squally, the ship anchored in St. Thomas harbour; 6h. rain, with thunder and lightning, and squalls; on the 4th squally and variable winds with heavy rain; P.M. moderate; 6h. again squally, with lightning and heavy rain; on the 5th, variable winds, moderate and cloudy; P.M. S.S.E. and calm. The wind remained S.S.E. and south, moderate and fine, and occasionally calm.

Sybille, 38.

1796. January 28th, off the Cape of Good Hope; 1h. A.M. lightning struck the ship and wounded a man on the main-top-mast-head.

The log gives but a meagre statement of the storm, but it appears by other accounts that the ship had the chain conductor hoisted although the log does not allude to this. The man was enabled to come down to the main deck where he died. Another man was also killed on the main deck, and Capt. E. Cooke who was walking the quarter-deck with Capt. Hardyman, then Lieut. of Sybille, was knocked down and much hurt. The ship and masts were not damaged.

The body of the man killed on the main deck smelt of sulphur strongly, a small black spot on his back was the only mark about him. A severe gale of wind had been succeeded by sudden calm with a heavy sea.

Wind on the 28th S.W.; previously variable; on the 29th, squalls with rain W.S.W., W., and N.W.; 30th, ditto weather with thunder and lightning. The ship had charge of a convoy.

This case is important as shewing the imperfect protection of a small conductor in the rigging.

Tees, 26.

1820. June 15th, at sea, off the Cape of Good Hope; A.M. moderate breezes and cloudy, wind northerly; P.M. squally from north-west; 4h. 30m. heavy rain, thunder, and lightning; 4h. 40m. a flash of forked lightning struck the fore-royal-mast, killed two seamen and wounded four; and splintered the fore-mast.

The winds on the previous days had been easterly, and had veered from S.E.b.E.; on the 13th to north-east with variable weather, rain and sleet; on the 14th moderate, with fresh breezes and cloudy weather; 15th cloudy, with lightning in north-west.

They observed a dark squall toward the afternoon, arising in the north-west, which ended in a storm of rain and thunder. It continued all the rest of the day; the wind on the next day veered to the west and remained from W.S.W. to W.N.W., so that it had from the 13th nearly completed the circle, after this it became again variable; on the 17th fine, with occasional airs from the north-east.

The log does not record much damage to the spars at the time of the accident; it appears, however, on further examination, and by reference to the log of H.M.S. Vigo, that the fore-mast was obliged to be taken out with the assistance of the main-yard of the Vigo.

The lightning struck the ship whilst striking top-gallant-masts; the two seamen who were killed, were on the top-mast-cross-trees; the five wounded were on the fore-top and forecastle.

The author is indebted to Capt. J. B. L. Hay, R.N., who was the officer on the forecastle at the time, for much valuable information relative to this case. It appears that the wind at 4h. 30m. P.M. made a sudden shift to north-west in a heavy thunder squall.

Tonnant, 80.

1804. December 5th, Belle Isle north sixty-five, east twelve leagues; heavy squalls from S.W.b.S. to W.N.W.; about 11h. A.M. the ship was struck by lightning twice within half an hour. The first time ten or twelve men were severely hurt, one man, John Small, then in the top, was killed by the second shock.

The log gives little or no account of this case. It appears, however, by the Naval Chronicle, that the main-mast was severely damaged, it was taken out at Plymouth in consequence soon after. The ship was in a very disorganized state. One of the seamen, now living, says that a small cloud was first observed, as if rising out of the sea, the morning being fine, and within half an hour after the ship was struck. The log mentions the burial of John Small killed by lightning.

The wind had been E. and S.E. on the 3rd; on the 4th, S.E. to W.N.W. moderate and cloudy; 5th, moderate and cloudy, after which strong gales and squalls; the wind on the 7th, fell back to N.E. moderate and cloudy.

(To be continued.)

On the Mariners' Compass.

Bovisand, Dec. 12th, 1843.

Sir.—Can the Astronomer-Royal seriously believe that we should receive, as sound philosophy, (and without examination) everything that may be printed in the Philosophical Transactions? Does he imagine that the quotations he has given in the December number of your Magazine, will disprove the passage he refers to in the compass papers? His letter and its quotations will neither invalidate the observations I made, nor induce mariners to place additional confidence in the correction of their compasses by means of permanent magnets, although Mr. Airy has requested you to print the passages he has quoted *from his own writings!*

I have had some forty years' experience as a practical and theoretical navigator, between latitudes 81° N. and 50 S. I have had some "*practical knowledge*" and experience of the magnetism of the Mariners' Compass, in both hemispheres, during the last twenty-seven years. I have also *read* and analyzed Mr. Airy's papers, and have discovered by reading them, that which has escaped the author's observation, namely, that he has been *deceived by appearances*, and that his personal knowledge of *induced* magnetism, and the mechanical philosophy of the Mariners' Compass is but limited!

The tabulated experimental results obtained by the Astronomer-Royal for the "Rainbow" and "Ironsides," were, no doubt, perfectly correct. These results evidently shew a disturbing magnetic force towards the side of the ships in every direction of the ships' heads. In the Ironsides the disturbing force towards the the starboard side varied, by the table, from + 0.428 to + 0.229, as the ship was turned round. These results induced Mr. Airy to conclude that, the constant disturbing force towards the starboard side, must arise from *permanent magnetism, and he but too hastily assumed* that it was so.

The operations conducted by Professor Airy were, no doubt, correctly and skilfully performed; he determined the magnetic intensity of the needle towards different parts of the ship, disentangled terrestrial magnetism from these forces, and having found how much the compass-needle was disturbed with the ship's head in various directions, he concluded that antagonist forces would counteract the disturbing forces, and he gave proof that the ships' compasses were actually made sensibly correct by means of permanent magnets and soft iron. There is no doubt that equal and opposite forces will destroy each other! a permanent magnetism may be applied so as to destroy or cancel an induced magnetism of an equal and opposite amount.

I have said that the Astronomer-Royal was deceived by appearances he believed that the magnetic disturbances in the Ironsides towards the starboard side, arose from some of the iron being *permanently magnetic.* I have now to prove that these disturbing forces may have arisen entirely from induced magnetism, I will not quote *my own writings*, because Mr. Airy may be regarded as better authority.

It is stated in Mr. Weale's treatise, p, 3, that the earth may be considered as a huge magnet; that it gives out magnetism to soft iron,

that the line joining the induced poles of a piece of iron "is the same as the direction in which it is found to influence a free magnetic needle "that is, is the same as the direction assumed by the dipping needle at that locality."

"Considering now a mass of soft iron like that entering into the structure of a ship, to be affected by the earth in the way described above, and considering the ship as moving into different positions, it is evident that, to discover the effect of this upon the ship's compass, we have a problem of considerable complexity to solve. It is not merely that a single piece of iron becomes a magnet with poles in a certain position; but that every piece of iron becomes a magnet, that these magnets are in different situations with regard to the compass, *and that the position of the poles of every one of these magnets changes as the ship turns round in any one place;* and also as the ship changes her place upon the earth's surface." *

I admit the correctness of the principles laid down by Mr. Airy in the above quotation, with the exception of the passage marked by italics. There are a great number of pieces of iron in *all ships*, whereof the positions of their poles *do not change as the ships* turn *round in any one place*. There is *one position* in which any oblong piece of soft iron may be placed, *in all latitudes*, when neither its magnetic intensity, its relative position with the compass, nor the position of its poles will undergo any change whatever *as the ship turns round in any one place*. The position referred to is the VERTICAL, and every vertical bar of iron in the Rainbow and Ironsides would retain the same amount of induced magnetism, and the same position in their *induced poles* as when the ships were turned round in the docks, *because* the *vertical bars* would continue to make a *constant angle with the direction of the dipping-needle*, and these vertical bars would exert disturbing forces upon the ships' compass in every respect *like permanent magnets*, so long as the vessel remained in an upright position, and in the same amount of magnetic dip.

The Astronomer Royal will now see that he has overlooked an important fact in inductive magnetism, which is unfavorable to his hypothesis.

We have been told that the compass of the Ironsides has been always found correct in all latitudes! I very much doubt it. I do not place much confidence in these reports from merchant vessels! If Mr. Airy can produce a written testimonial from the Hydrographer to the Admiralty, that all Her Majesty's ships that have had compasses corrected by permanent magnets, have made *official reports* that the compasses *remained perfectly correct in all latitudes*, such a document will have great weight with your readers.

If the magnetic energy of the Mariners' Compass remained constant, *if* the magnetic dip continued the same, or nearly so, and *if* artificial magnets could be made permanent, and ships' cargoes were always alike, then might Mr. Airy's plan be safely applied to ships' compasses; but, these conditions are inadmissible. His plan, however, in many cases may be safely applied, *if*, its principles be understood by those

* Results of experiments on the disturbance of the Compass in iron built ships, made by George Biddle Airy, Esq., A.M., Astronomer Royal.—John Weale, 1840.

navigating the ships having their compasses corrected by it; but blunders are frequently made!

If reference be made to the Second Report of the Committee on Shipwrecks for 1843, with the Minutes of Evidence upon which the Committee formed their report, it will appear that the British and North American Royal Mail Steam Ship, "Columbia," left Boston on the 1st of July, and ran ashore on Seal Island on the following day, and was wrecked. The Captain states in his evidence that, during two years that he had been in thse Packets, they were always to the southward of their reckoning in crossing the Bay of Fundy; that they ascribed this southerly set to a constant southerly current from the Bay of Fundy; that their *usual course* from Boston to Seal Island was E. ½ N. by compass; and that the Columbia had been steering the usual compass course of E. ½ N. when she crossed the Bay of Fundy for the last time, and deposited her bones among the rocks at Seal Island.

It also appears by the Captain's evidence* that the Columbia's compass had been examined and corrected by a *scientific person:* that magnets had been applied near the binnacle: so that when the compass had been corrected, and the ship steered the usual course of E. ½ N. (the correct course), she quits Boston, and on a straight line runs upon the rocks near Seal Island, and becomes a total wreck.

The sea was perfectly smooth during this passage, the winds were light, and the weather foggy; the Columbia, going at the rate of nine and a half or ten knots, would be perfectly upright, and upon a course of E. ½ N. so that the artificial magnets would act upon her compass in the Bay of Fundy, in the same way they acted when they were fixed in the vessel when the ship's head was nearly east or west in the Liverpool docks. The iron quarter-davits, the upright iron pillars between decks, or in the engine room, would be either *vertical,* or as near a vertical as *they were* when the "scientific person" corrected the compass by turning the ship round in the dock. The Magnetic *dip* at *Liverpool, Seal Island,* and *Boston Lighthouse*† does not materially differ in amount; and therefore the Columbia's compass, even although it was corrected by *permanent magnets* would not be sensibly in error. The vessel was however run among the rocks by it!!!

I have had to refer to *another part of Professor Airy's Paper*; it will appear in the *Nautical Magazine* when I shew *how* the compass may be made correct, under every circumstance of steering, heeling or rolling without the aid of permanent magnets! but the matter rests at present, till certain experiments, *ordered to be made on a large scale,* shall be carried out.

The little episode about the Columbia has been introduced in order to shew how easy it is for erudite professors, or illiterate sailors to be mistaken by appearances.

I am, &c.,

WILLIAM WALKER,
Queen's Harbour Master.

To the Editor, &c.

* For the context, See the minutes of Captain Shannon's evidence appended to the 2nd Report of the Committee on Shipwrecks for the year 1843. For further commentary on this matter See *Shipping Gazette* for Nov. 30th 1843.

† The dip at Boston in 1839 by an excellent observer with excellent instruments was 74° 20′, that at Halifax 75° 0′ by another observer.

Leaving the Ship in Case of Wreck.

Sir.—I anxiously wish to call the attention of masters of ships to the extreme danger of leaving the ship and taking to the boat, in storm or wreck; as experience appears to prove, *whatever appearances may be*, that it is safer to stick to the ship. I will mention a few instances which have lately occurred, within the space of a few miles. A large brig from Yarmouth was being driven ashore in a storm at Bude, on the north coast of Cornwall, and they took to their boat when near land, when it capsized, of course, in the breakers of that fearful sea, and every soul perished. The brig came ashore, and in a couple of hours, was left dry, uninjured, on the beach. This happened two years ago. On the 17th of last month a large barque was wrecked at Millhook, near Bude. The moment she struck they lowered the boat, and the boy jumped in; but (luckily before the rest could follow) a sea snapped the rope, capsized the boat, and drowned the boy. The rest, except one man washed overboard from the helm, took to the rigging, and were all saved. A brig also was wrecked the same day, close by, but they stuck to the ship, and were all saved. On the 28th ult. two large brigs were wrecked at Bude; the crew of one stuck to the ship, and were all saved; the crew of the other (she having sprung a leak and lost her rudder) unhappily left her in a boat, off Morwenstow, when the boat was, of course, capsized in that dreadful sea, and every soul perished. Eight bodies were washed ashore last week. The brig drifted down Channel, and came ashore at Bude; and all hands would have been saved had they stuck to her and taken to the rigging.

It is perfect madness, on *that* dreadful coast at least, to take to the boat.

I also beg shipmasters to observe, that almost every storm in the Bristol Channel *begins* from the S.E. or S., and then, in about twelve hours *chops suddenly round to the* W., and blows nearly a hurricane. Their not observing this causes the wrecks of most of the many ships lost on that dreadful coast. They keep in shore in the S. or S.E. wind, and when it veers to the west they are embayed between the Land's End on the south and Hartland Point on the north, and are *certain* to be wrecked if the gale prove long.

I am, Sir, your obedient servant,

Nov. 18, 1843. C. E. R.

Anchorage in Yarmouth Roads.

Shipmasters frequenting the East Coast will be pleased to learn that the dues exacted for anchorage in Yarmouth Roads have at length been abolished by the vote of the Town Council. The surcharges which were made by the parties employed to collect these dues, have, of late, been the cause of much dissatisfaction; and, whether the amount produced by the anchorage rates was much or little it must be conceded, that, by their resolution to give up that sum, the authorities of the town of Yarmouth have evinced a very laudable consideration for the convenience of shipping having occasion to bring up in the roads.

Great Yarmouth, Nov. 18, 1843.

Sir.—Some observations appeared in your valuable paper some little time since, respecting vessels anchoring in Yarmouth Roads being liable to 6d. each; and for the information of all masters of ships passing these roads, we beg to say, that at a council holden on Friday, the 17th inst., it was proposed and carried through, that such charge should be abolished, and the men holding authority to collect the same were discharged; therefore, vessels are not liable to pay anything for anchorage in Yarmouth Roads. Thanking you to give this insertion,

We are Sir, your most obedient servants,

Shipping Gazette. Matthew Butcher and Sons.

Rodger's Anchors.—The following testimony of Mr. Russell, the late master of H.M.S *Cyclops*, being the result of his experience during the service of that ship in the Mediterranean, on the Coast of Ireland, and with the Royal Squadron, for about four years, adds another important confirmation to the many we have recorded of the value of Lieut. Rodger's Anchor.

H.M. Steam Vessel Cyclops, September 29th, 1843.

My Dear Rodger.—Having had one of your Small Palmed Anchors of 30 cwt. on board this ship for nearly four years, we had frequent opportunities of testing its goodness, and I am happy in being able to inform you that on all occasions we found it hold well, and do its duty quite as well, if not better, than another we had on board by *Perring* of 33 *cwt.*

I certainly prefer your anchor to the old one, holding better (although of less weight,) and being much easier and quicker stowed, I should always wish to have them in any vessel I may be in, and will feel great pleasure in recommending them. Wishing you every success and patronage, believe me,

Very faithfully yours,

(Signed) James Thomas Russell,

To Lieut. Rodger, r.n. *H.M. Steam Vessel Cyclops.*

The Cockle Gat Light.—Our readers will be aware that we have recently had occasion to advocate the cause of sailors and of the shipping interest generally, but more especially with reference to the necessity of rendering available to the utmost our roadsteads and harbours by buoying and lighting them thoroughly. It is now, therefore, with much gratification that we announce that a light-vessel was placed on Tuesday, the 12th inst., in the Cockle Gat, at the northern entrance into the Yarmouth Roads; and thus the greatest thoroughfare for shipping on the face of the globe is rendered comparatively safe and made available by night as well as by day.

The Vestal, Trinity-steamer, having this light-vessel in tow, was seen entering St. Nicholas Gat on Tuesday morning, when the vessels lying in Yarmouth Roads immediately hoisted their colours, and as she passed close alongside Her Majesty's ship *Blazer* the crew manned the

rigging and gave her three hearty cheers by way of welcome. At noon the light-vessel was in her position, official notice of which will of course be issued by the Trinity Board as usual; but it may be useful to our readers to state generally, that she is placed on the east side of the entrance, at about half a mile N.N.E. of the Sea Heads Buoy, and that ships coming from the northward may steer towards her on a S.S.E. course, and keep her bearing N.E. ½ N. in running from her up into the Roads.

We understand that in consequence of this light-vessel being placed, the Admiralty have ordered a new survey of the Cockle Gat and of Yarmouth Roads to be made, which is now in course of execution, if not nearly completed, by the officers of Her Majesty's ship *Blazer*, and is to be published by Christmas. The changes in the sands are said to be very material.

The light to be shewn by the Cockle light-vessel is to be a bright revolving light; this will sufficiently distinguish it from any other in the vicinity, and avoid the possibility of mistake, as there is no other revolving light within 30 miles' distance. The vessel, like all other light-vessels, carries a ball at her mast-head, and in foggy weather will sound a gong every ten minutes. This alone would render her of great service, but the utility of the light in this intricate navigation by night is invaluable, and by thus acceding to the wishes of the trade, the Elder Brethren of the Trinity-house have conferred the greatest boon yet bestowed on the shipping interest of the east coast of England.—*Times*.

Decisions in the Admiralty Court.

(From the Shipping Gazette.)

Ann.—*Salvage*.—On the 25th of July last the Court awarded to the Marshall Bennett and the Cyrus salvage remuneration for services rendered to the Ann. On the application of Dr. Addams, the Court now apportioned the salvage.

Ann and Mary.—*Collision*.—This was a case of collision. The Ann and Mary and the Lady Clinton came in contact, on the night of the 5th December last, near the Hasborough Sands. An action was brought by the Ann and Mary, at common law, and tried at the Spring Assizes at Durham, when a verdict was obtained in her favour. Dr. Lushington was assisted by Captains Wellbank and Farquharson, who were of opinion that the blame was attributable to the Ann and Mary, and the Court therefore pronounced for the costs.

Two Brothers.—The registrar having allowed a bill of expenses in this case, the Court gave the costs.

Columbine.—*Salvage*.—In this case a tender had been made of 600*l*. for salvage services, and accepted. The Court apportioned the reward.

CLYDESIDE.—In this case the Court pronounced for the validity of a bottomry bond, and also for seamen's wages.

EBENEZER.—*Collision.*—A collision occurred between this vessel and the Concord early on the morning of the 23rd of May last, off the Coast of Norfolk, by which the latter was totally lost. The Court was assisted by Captains Hayman and Probyn, who were of opinion that the collision was unavoidable. The Court, therefore, dismissed the action, but without costs.

FAME.—In this case the Court dismissed the owners, on the ground of the pilot being duly licensed.

FORTITUDE.—*Wages.*—The ship having been arrested in the cause of wages, the mortgagees of three-fourths of the vessel applied to the Court to have the freight brought in, and their portion paid to them. The owner of the other fourth appeared under protest against the jurisdiction of the Court.—Judgment was reserved.

ITINERANT.—*Collision.*—A collision occurred between this vessel and the Isabella, at half-past two o'clock A.M., on the 23rd May last, off Flamboro' Head. The Court was assisted by Captains Wellbank and Maton, who are to reserve their judgment till the first day of term.

LORD AUCKLAND.—*Wages.*—In this case the Court decreed possession of the ship, and a perishable monition in two suits for abstraction of wages.

MARY ANN.—*Salvage.*—An action was entered against this vessel by the yawl Dart, to recover remuneration for salvage services rendered to her on the 23rd of June last, on the Ower Sand. The Court awarded 250*l.*, with costs.

NIMBLE.—*Collision.*—It occurred between the Nimble and the Croft, off Greenwich, on the night of the 10th of January last. A cross action had been entered. The Trinity Masters were of opinion that the blame was imputable to the Nimble, and the Court therefore pronounced for the damage, dismissed the other action, and condemned the Nimble in costs.

PANDA.—*Salvage.*—The sum of 144*l.* 7*s.* 10*d.*, the balance of property taken from this pirate vessel, was condemned to the use of the Queen, and then with the consent of the Crown, the Court awarded the whole amount to Captain Trotter, the officers, and crew of H.M.S. Curlew, for salvage.

PATRIOT.—*Salvage.*—This was a claim for salvage remuneration for services rendered by an association at Yarmouth to this vessel, on the 29th of May, when on Scroby Sand. The Court awarded 800*l.*

SPEED.—In this case the Court refused the motion made on the last Court day.

THETIS.—*Bottomry.*—This was a suit to recover the amount of a bottomry bond. The Court pronouced for the validity of the bond, and decreed possession of the ship, and a perishable monition.

Traveller.—*Collision.*—In this case an action was brought by the Yarn to recover the amount of damage sustained, by reason of a collision between her and the Traveller, on the 4th of January last, near the Spurn Light. The Court was assisted by Captains Rees and Gordon, who imputed the blame to the Traveller, and she was condemned in the damage and costs.

Kingston Harbour, *Jamaica.*—We understand that Mr. Biddlecombe, H.M. Harbour-Master at Port Royal, has just completed an elaborate survey of this harbour, for which service he has received the thanks of the Mayor and Council of the city of Kingston. One immediate good effect of Mr. Biddlecombe's exertions is that of enabling ships to keep off the ground going through the narrows of 190 yards width, a circumstance which had been of frequent occurrence.

Magnetic Mountain.—About three leagues south of Lisbon, near Monta Chique there is a mountain, the top part of which is composed of black oxide of iron, so highly magnetic that the north needle stands at the summit of the mountain due south, the south needle dipping so much as scarcely to be able to traverse. In various places on the mountain side, the needle varies to different points, but in no one place in which I have tried it, does it stand due north and south.

This immense mass of iron appears to have been hove up by some subterraneous convulsion, and presents no appearance of stratification.

(Signed) Michael Forster, c.e.,
On board Montrose steamer, Aug. 4th, 1843.

Gunnery.—Some experiments have recently been made near Liverpool with shot cast in a cylindrical, instead of a spherical form; and it appears from the results that in many cases cylindrical shot will be greatly superior. There is less windage in a cylindrical shot; the explosive force of the gunpowder is brought to act on it most effectually, and with less loss of power. By employing cylindrical shot, a cannon of a given calibre can carry much heavier metal, and by this means a great saving, it is supposed, may be effected in the weight of the guns. In Naval gunnery and battering artillery this invention may, indeed, be of considerable importance, but for field pieces it would not be available, for the bounding, or *ricochet*, of the ball does more execution than by firing point blank; and that would be impracticable with cylinders instead of balls. A proposition was made to the Admiralty not long since, for firing simultaneously two balls connected by a chain, from cannon at the fore and after part of the ship, whereby a whole deck might be swept by the chain connected balls. The recent application of firing gunpowder by galvanism would greatly facilitate such twin-gunnery practice, which might also be applied to field-pieces, placed hundreds of yards apart, with most destructive effects.—*Morning Post.*

The Nelson Flag.—It is a fact which the curious in such matters may think worthy of recording, that the flag which floated over the Nelson Testimonial in Trafalgar-square lately, is part of the identical ensign which 38 years ago waved over the immortal hero himself, on the memorable occasion of his last greatest achievement and death.

The Chinese Tariff.

(From Felix Farley's Bristol Journal, October 28, 1843.)

Sir.—The vast importance of the Chinese Tariff requires that it should be reduced to English weights, measures, and monies, for the use of British merchants, and not having yet observed that this has been done, I beg to trouble you with such a table, together with a few observations upon the standard to be observed.

The definition and determination of the Chinese tael is expressed in several different ways. 1st. It has been generally in England taken to be one-third of the pound sterling, or 6s. 8d., or 80 pence, making the mace its 10th, 8d., and the candereen its 100th part, 8-10th of a penny. This simple relation to our own money would be a great advantage to English merchants if it were fully established, but some, as Beawes, make the candareen ¾d., reduced the tael to 6s. 3d.

2ndly. It is now, however for the most part compared with the Spanish dollar. Thus the latest and perhaps the highest authority, that of Mr. Pope, in the Yearly Journal of Trade for 1843, states 72 taels to be equivalent to 100 dollars. The Spanish dollar is commonly estimated at 4s. 6d., but her Majesty's proclamation (Yearly Journal of Trade, 1840, p. 391*), issued for the West Indies, makes it equivalent to 4s. 2d. The tael, therefore, will be 6s. 3d. if we take the former, and 5s 9½d. if the latter for our guide.

3rdly. It was originally compared with the Chinese silver coin called mace, and their copper coin called cash, but the mace has long been disused; 1000 cash were once equivalent to one tael, but the depreciation of these coins by deterioration of the metal and reduction of their weight, so amply illustrated in the highly interesting and most authentic work of Mr. Davis, has now rendered the tael equal to a much greater number of cash. By Sir Henry Pottinger's Hong Kong proclamation of the 29th of March, 1842, 1200 of them are declared equal to one dollar. In weight I have found then vary from about 35 grains troy to twice as much. Du Halde says that the French sou is equivalent to the 100th part of the tael, that is to the candereen, and also that it is equal to 6 cash, instead of 10.

4thly. The Chinese tael is a weight, and has its value expressed by European weights, either avoirdupois or troy, and this is the truest mode of determining its equivalent in fine silver, seeing that the references to English money do not agree, that dollars differ materially in value, and that the Chinese cash are still more different from each other in their weight and quality. Messrs. Gordon and Crawfurd, in their admirable treatise upon Chinese commerce, give a table stating the tael is equal to 1 1-3 ounce avoirdupois, or 579.84 grains troy. These, unfortunately, do not agree neither, for 1 1-3 oz. avoirdupois contains 437.5 and 145.8 1-3 grs., or 583.3 1-3 grs. troy and not 579.84. Again, Beawes in his "Lex Mercatoria," states that the tael was 1oz. 2dr., of course troy weight, which is 480 and 120, or 6000 grains. The editor of "Mortimer's Commercial Dictionary," in his "Universal Commerce," p. 64, says 100 taels should weigh 120 oz. 10 dwts. troy, or 57840 grs. or the single tael 5784, which is less than any of the above. He says, also, that 100 Spanish dollars should weigh 88 oz. 13 dwts; that is, 42,552 grs., of which we take the 72nd part, according to Mr. Pope, the tael comes out 591 grs.

Now, 16 taels make a catty, and 100 catties a pecul; all authorities, I believe, concur in making the pecul 133 1-3 lb. avoirdupois, or the catty 1 1-3 lb., for which reason I prefer taking the tael as 1 1-3 oz., or 583 1-3 grs.. The English crown piece, or 5s. is so nearly an avoirdupois ounce that if we could make this the standard the tael would come out as at first 5s. and 20d., or 6s. 8d., or 80d.; but in China all silver coin is taken as bullion, and the duties of course will be paid in bullion. The real value of the tael must, therefore, be

* See also p. 700, of our last vol.

sought in the market price of standard silver. This, at the present time, I find to be 4s. 11¼d., per ounce troy, which is almost exactly 4s. 6d. the ounce avoirdupois, or 6s. the tael; and I have accordingly made this my standard in the following table, wherein I have reduced the tariff to English weights and monies. I prefer this to taking the market price of the dollar, whether Mexican or Spanish, new or pillar, and using the multiplier 1.208, because I consider that the term "sycee," means "*perfectly pure.*" This word I believe to be originally Chinese, although the characters used by the Chinese to express it do not indicate its proper etymology. I have no doubt that was originally, in the orthoepy of Morrison, "tsuh sih," or "full quality"; but the characters commonly used for it mean "fine silk," expressive of what minerologists would call it's "lustre satiny."*

I cannot conclude without suggesting that, at the present low price of copper, 1000 tons, costing 70,000*l.* or 80,000*l.*, might advantageously be coined into Chinese cash, weighing each 58 1-3 grs. This would greatly relieve the distress of the neighbourhood of Swansea, and supply Hong Kong and the Chinese with a good currency during the present and the next generation; for, if neatly executed, it would be universally coveted and hoarded up in abundance, and would be a good payment for tea, instead of opium. On one side of the coin I would have the words "Victoria Regina," and on the other, as usual, "perforated token," with "Hong Kong" instead of the Emperor's name.

I am, Sir, your obedient servant,

Bristol, Oct. 14. SAM. ROOTSEY.

EXPORTS.

	£.	s.	d.
Alum, per cwt.	0	0	6
Aniseed star, ditto	0	2	6¼
Ditto, oil of, do.	1	5	2½
Arsenic, do.	0	3	9¼
Bangles or glass armlets do.	0	2	6¼
Bamboo screens, and bamboo ware of all kinds, do.	0	1	0
Brass leaf, do.	0	7	6¾
Building materials, do.	duty free.		
Bone and horn ware, do.	0	5	0½
Camphor, do.	0	7	6¾
Canes of all kinds, pr 1,000	0	3	0
Capoor cutchery, per cwt.	2	1	10
Cassia, do.	0	3	9¼
Ditto, buds, do.	0	5	0½
Ditto oil do.	1	5	2½
China root, do.	0	1	0
China ware, all kinds, do.	0	2	6¼
Clothes, ready made, do.	0	2	6½
Copper ware, pewter, ditto, &c., do.	0	2	6¼
Corals, or false coral, do	0	2	6¼
Crackers and fire-works of all kinds, do.	0	3	9¼
Cubebs, do.	0	7	6¾
Fans (feather fans,) &c.,do.	0	5	0½
Furniture of all kinds, do.	0	1	0
Galingal, do.	0	0	6
Gamboge, do.	0	10	1
Glass, and glass ware of all kinds, do.	0	2	6¼
Glass beads, do.	0	2	6¼
Glue, as fish glue, &c., do.	0	2	6¼
Grass cloths (all kinds) do.	0	5	0½
Hartall, do.	0	2	6¼
Ivory ware (all kinds), do.	1	5	2½
Kittysols, or paper umbrellas, do.	0	2	6½
Lackered ware, all kinds do.	0	5	0¼
Lead (white lead) do.	0	1	3
Lead (red lead,) do.	0	2	6¼
Marble slabs do.	0	1	0
Mats (straw, rattan, bamboo, &c.,) do.	0	1	0
Mother-o'-Pearl ware, do.	0	5	0½
Musk, per lb.	0	2	6½
Nankeen and cotton cloth of all kinds, per cwt.	0	5	0½
Pictures—viz., large paintings, each	0	0	7¼
Rice paper pictures, per 100	0	0	7¼
Paper fans, per cwt.	0	2	6¼
Paper of all kinds, do.	0	2	6¼
Pearls (*i.e.*, false pearls) do.	0	2	6¼

* We have something like this at home. There is a place in Wales called Llanseashore, but which is not upon the sea shore. This name Stor or Shore is the old British name of George, or Saint George, and exists also in the English word Wyndeshore, or Windsor, which I should Latinise "Venta Georgii," from the round table, castle, and chapel of St. George.

	£.	s.	d.
Preserves and sweetmeats of all kinds, do.	0	2	6½
Rattan work of all kinds, do.	0	1	0
Rhubarb, do.	0	5	0½
Silk, raw, whether from Chekiang, Canton, or elsewhere all kinds, per cwt.	2	10	4¾
Coarse or refuse silk, do.	0	12	7¼
Organzine, all kinds, do.	2	10	4¾
Ribbons, thread, &c., do.	2	10	4¾
Silk piece goods of all kinds, as silks, satins, pongees, velvets, crapes, lustrings, &c., do.	3	0	5¾
N.B. The additional duty of so much per piece, hitherto levied, to be henceforth abolished.			
Silk and cotton mixtures, silk and woollen mixtures, & goods of such classes, do	0	15	1½
Shoes and boots of leather, satin, or otherwise, do.	0	1	0
Sandal-wood ware, do.	0	5	0½
Soy, do.	0	2	0¼
Silver and gold ware, do.	2	10	4¾
Sugar, white & brown, do.	0	1	3
Sugar candy, all kinds, do.	0	1	9¼
Tin-foil, do.	0	2	6¼
Tea, do.	0	12	7¼
Tobacco of all kinds, do.	0	1	0
Turmeric, do.	0	1	0
Tortoiseshell ware, do.	2	10	4¾
Trunks (of leather), do.	0	1	0
Treasure, *i. e.* coins of all kinds			free
Vermillion, per cwt.	0	15	1½

Articles unenumerated in this tariff to pay a duty of 5 per cent. *ad valorem.*

Imports.

	£s.	s.	d.
Assafœtida, per cwt.	0	5	0½
Bees' wax, do.	0	5	0½
Betel nut, do.	0	0	9
Biche de mar, 1st quality or black, do.	0	4	0½
Ditto, 2nd ditto, white, do.	0	1	0
Birds' nests, 1st quality, cleaned, do.	1	5	2½
Ditto, 2nd ditto, good middling, do.	0	12	7¼
Ditto, 3rd do., uncleaned, do	0	2	6½
Camphor (Malay) 1st ditto, clean, per lb.	0	5	0½
Ditto, 2nd do., refuse, do.	0	2	6¼
Cloves, 1st do, picked, per cwt.	0	7	6¾
Ditto, 2nd do., mother, do.	0	2	6¼
Clocks, watches, spy-glasses, all kinds of writing-desks, dressing-boxes, cutlery, perfumery, &c., 5 per cent. *ad valorem.*			
Canvas, 30 or 40 yds long, 24 to 31 in. wide, pr piece	0	3	0
Cochineal, per cwt.	1	5	2½
Cornelians, per 100 stones	0	3	0
Ditto heads, per cwt	2	10	4⅝
Cotton, ditto	0	2	0¼
Cotton manufactures—viz. Long cloths, white, 30 to 40 yards long, 30 to 36 inches wide, per piece	0	0	10¾
Cambrics and muslins, 20 to 24 yds long, 40 to 46 do.	0	0	10¾
Grey, or unbleached, cottons, long-cloths, domestics, &c., 30 to 40 yards long, 28 to 40 inches wide, do.	0	0	7¼
Grey twilled cottons, 30 to 40 yards long, 28 to 40 inches wide, do.	0	0	7¼
Chintz and prints, of all kinds 20 to 30 yards long, 26 to to 31 inches wide, do.	0	1	2½
Handkerchiefs under 1 yard square, 72 each,	0	0	0¾
Handkerchiefs above 1 yard square, 1.08 do.	0	0	1
Ginghams, pullicates, dyed cottons, velveteens, silk and cotton mixtures, woollen and cotton mixtures and all kinds of fancy goods, not in current consumption, 5 per cent *ad valorem*			
Cotton yarn and cotton thread per cwt.	0	5	0½
Cow bezoar, per lb.	0	5	0½
Cutch, per cwt.	0	1	6¼
Elephant's teeth, 1st quality, whole, do.	1	0	2
Ditto 2nd quality broken do.	0	10	1
Fish maws, do,	0	7	6¼
Flints, do.	0	0	3

	£.	s.	d.
Glass, glass ware, and crystal ware of all kinds, 5 per cent *ad valorem*			
Gambier, per cwt.	0	0	9
Ginseng, 1st. quality do.	9	11	7
2nd. do. or refuse do.	0	17	7¾
Gold and silver thead :—			
1st. quality or real, per lb.	0	0	7¾
2nd. do. or imitation do.	0	0	1¾
Gums, Benjamin, per cwt.	0	5	0½
Olibanum, do.	0	2	6¼
Myrrh, do.	0	2	6¼
Gums unenumerated 10 per cent *ad valorem*			
Horns, Bullocks', and Buffaloes', per cwt.	0	10	1
Horns, Unicorns' or Rhinoceros', do.	0	15	1½
Linen, fine, as Irish or Scotch, yards long, inches wide, per piece	0	3	0
Coarse linen, as linen and cotton mixtures, silk and linen mixtures, &c., 5 per cent *ad valorem*			
Mace or flour of nutmeg, per cwt.	0	5	0½
Mother of pearl shells do.	0	1	0
Metals, viz.,			
Copper, unmanufactured, as in pigs, do.	0	5	0½
Ditto manufactured, as in sheets, rods, do.	0	7	6¾
Iron, unmanufactured, as in pigs, do.	0	0	6
Ditto, manufactured, as in bars, rods, &c., do.	0	0	9
Lead in pigs, or manufactured do.	0	2	0¼
Quicksilver, do.	0	15	1½
Steel, unmanufactured, do.	0	2	0¼
Tin do.	0	5	0½
Tin plates, do.	0	2	0¼
Unenumerated metals, 10 per cent *ad valorem*			
Nutmegs, 1st quality, or cleaned, per cwt	0	10	1
2nd, do. or uncleaned do.	0	5	0½
Pepper do.	0	2	0¼
Putchuck, do.	0	3	9¼
Rattans, do.	0	1	0
Rice, paddy, and grain of all kinds	duty free.		
Rose maloes, per cwt.	0	5	0½
Saltpetre (to be sold to Government agents only) per do.	0	1	6¼
Sharks' fins, 1st quality, or white, per do.	0	5	0½
2nd quality, or black per do.	0	2	6¼
Skins and furs, viz.,			
Cow and ox hides, tanned and untanned	0	3	0
Sea otter skins, each	0	0	10¾
Fox skins, large, each	0	0	10¾
Ditto small each	0	0	5½
Tiger, leopard, and marten skins each	0	0	10¾
Land otter, racoon, & sharks skins, per 100	0	12	0
Beaver skins, do.	1	10	0
Hare, rabbit, & ermine, do.	0	3	0
Smalts, per cwt.	1	0	2
Soap, do.	0	2	6½
Stock-fish, &c.	0	2	0¼
Sea-horse teeth	0	10	1
Treasure and money of all kinds			free
Wine, beer, spirits, &c. :—			
In quart bottles per 100	0	6	0
In pint ditto, do.	0	3	0
In casks, per cwt.	0	2	6¼
Woods, namely :—			
Ebony, do.	0	0	9
Sandal-wood, do.	0	2	6¼
Japan-wood, do.	0	0	6
Unenumerated woods, 10 per cent. *ad valorem.*			
Woollen manufactures, viz.			
Broad cloths, habit cloth, Spanish stripes, &c., 51 to to 64 in. wide, pr sq. ft.	0	0	11
Long ells, kerseymeres, flannel, & narrow cloths of this description, do.	0	0	5½
Blankets of all kinds, ea.	0	0	7¼
Dutch camlets, per sq. ft.	0	0	11
Camlets, do.	0	0	5¼
Imitation do. bambazettes, &c., do.	0	0	2½
Bunting, narrow, do.	0	1	3¾
Unenumerated woollen goods or silk and woollen, and cotton and woollen mixtures, &c., 5 per cent. *ad valorem.*			
Woollen yarn, per cwt.	0	15	1½
Articles unenumerated in this tariff 5 per cent. *ad valorem.*			

Voyage of H.M.S. Cornwallis.

The Attack on Chapoo, on the 18th, of May, 1842.

(Canto the Third.)

Cornwallis at last, has had something to do,
For since I last wrote we have taken Chapoo ;
From the fight at Tze-kee at Chusan we lay
Seven weeks: and then anchored at " Just-in-the-way."
Here we gathered our force, and to make a good show
Every man was withdrawn from the town of Ningpo.
The Chinese had of late kept us on the qui-vive,
After what they had seen. You will scarcely believe
That one night, as we quietly lay in Chusan,
Fire rafts through the southernmost passages ran,
Which were none of them seen in the darkness of night,
Till the harbour burst out in a fine blaze of light.
In they came ! some two or three hundred in number,
Now and then one blew up with a noise loud as thunder.
They consisted of two or three boats lashed together,
Filled with powder, saltpetre, and bundles of leather.
Such a noise to be sure ! such shouting and screaming,
(Broad lights on the face of the smooth water gleaming ;)
Here and there a large raft was seen to explode,
Threatning quite to destroy all our ships as they rode.
But our boats towed them all from the vessels quite clear,
Though some of them certainly passed rather near.
They then drifted on shore in all parts of the bay,
And some were still burning and smoking next day.
A small fleet which intended another surprise,
Before being fired were settled by Wise.
The China men also got into a plan,
If they caught by himself an unfortunate man,
(Having first of all stopped up his mouth with a gag,)
Of walking him off on a pole in a bag.
For taking the ships so close in to Chapoo,
We're indebted to Kellett and Collinson, who
By dint of hard work, perseverance, and sounding,
Anchored all of us close to the shore, without grounding.
The currents are rapid. The water quite shallow,
And so full of mud that the colour is yellow.
The town is commanded by hills,—a low range
Which stretch to the east. That they might arrange
On the plan of attack, Sirs William and Hugh
Reconnoitred the place, and had a good view
Of the sort of defences the Tartars had made,
Comprising a six foot high gingall stockade.
Two miles from the town, about half a mile long,
We could plainly distinguish the heads of the throng
As they crouched the whole length of the hills and the dales ;
With their banners and spears, their buttons and tails.
On the hill next the town were two forts with brass cannon,
At the town, one was spied as the two steamers ran on.
Before four o'clock on the eighteenth of May,
The troops were beginning to land in a bay
Some three or four miles from the walls of the town,
The Columbine anchored not quite so low down:

With the Algerine, Starling, and Bentinck, ("now Plover;")
And the steamers, all destined the landing to cover.
Tenasserim took the Cornwallis in tow,
And we very soon found ourselves anchored below
The fort in the town;—where the Blonde and Modeste
Had been placed—the Cornwallis reserving the rest.
As soon as the Bentinck a signal had made
That the troops were ashore, on the batteries we played;
This did not last long, for the troops now let loose,
Carried hill after hill—running on like the deuce.
They were met at the first mentioned gingall stockade
By a terrible volley. But the Tartars afraid
Of the fury, with which our brave troops "went ahead"
Turned their tails, and ran off, leaving numbers of dead.
The red coats now close to the ships hove in sight,
So we landed our boats, the Chinese in full flight;
And just came in time, in the rear of the town,
To see Colonel Mountain get shot, and knocked down.
A large joss-house well placed in a gorge of the valley,
Made a capital place for the Tartars to rally.
They opened a volley of matchlocks so well,
That Tomlinson heading his regiment fell;
Oh! certainly nought gained by England that day
For the loss of such gallantry ever could pay.
With the powder of Pears and the rockets of Knowles,
The building was very soon pierced with large holes,
And then catching fire, the smoke was so thick
That the Tartars were routed like rats in a rick.
The main Chinese force finding fighting all vain
Left the town to itself, scampered off in the plain.
As we moved round the walls, the scene just below
Was outwardly lovely—within all was woe.
That part of the town where the Tartars reside
Is walled off from the rest. The streets not very wide,
Are composed of long rows of small cottages standing
Like tents in a camp,—arms ready for handling
In each house were found. Such thousands of bows,
Arrows, matchlocks, and spears, as were there no one knows.
After two or three days I walked over the place,
The small and neat houses were void,—not a face
To be seen,—not a soul to be found;
But the wells and canals filled with bodies all drowned.
In one of the gardens some young "demoiselles"
Were found dead, with their feet sticking out of the wells.
Heavy showers had fallen and completed the gloom,
Yet the sun was now shining; the roses in bloom.
Our total of wounded and killed on this day
Amounted to sixty,—I omitted to say
That of all who were hurt in this terrible scramble
The man who most suffered was poor Captain Campbell.
We remained here ten days—then embarked all the force,
Having burnt and destroyed every store house of course.
In the harbour were numbers of junks large and small,
(And having prepared a good train in them all)
As the troops left the town we created a blaze,
Which was seen to illumine the sky for some days.
A royal salute, six days after the fray,
Was fired, to honour our Queen's Natal day;
And our Admiral's flag shifted "Blue at the Fore"
Caused another salute. I shall now say no more
Except,—the remains of brave Tomlinson sleep—
In the son of a sailor's right berth "In the deep."

Rugged Islands, near the Yang-tze-Kiang,
June 1st, 1842.

Nautical Notices.

The Formigas and Dollabarats Shoal.—One of the most important results of the surveying voyage of H.M. Styx, to the Azores, is that of fixing correctly the positions of the dangers known by the names abovementioned. The only survey of the Azores that we know of, is that by Tofino, and that is published on so small a scale as to be incapable of shewing the resources of the islands in point of harbours for ships. But deficient as it might have been in this respect, it might still have been supposed to shew the positions of detached dangers correctly,—that dangerous patches of rock between the islands should be accurately placed on this chart, more especially when the means are considered which Tofino had at his command.

We shall find however by the following extract of a letter from Capt. Vidal, in command of H.M.S. Styx, to the Hydrographer to the Admiralty, that such is not the case; and that seamen in their ships have therefore been exposed to wreck since the survey of Tofino was executed down to the present time.

Capt. Vidal says, with that modesty which belongs to an officer, who knows how to appreciate the laborious duties of a surveyor; "It is with regret and vexation, I have to state that I find Tofino considerably in error, in that celebrated Hydrographers' work relative to this locality." (Formigas.)

"He states, in his Sailing Directions, that these rocks were landed on, to observe various points of the island of St. Mary, and that from the centre of the larger islet Punto Castelho on St. Mary's bears S. 24° 30′ W., and the Pico Alto on the same island S. 34° 30′ W., and having observed in its parallel and very close to it, the latitude may be confidently stated at 37° 17′ 10.″

"Now to carry on our operations at the Formigas, we anchored the Styx in thirty-seven fathoms, and I landed on the larger Formiga with my theodolite, and observed our stations on the island of St. Mary, which we had previously surveyed, and with all the hills of which I was perfectly familiar, having travelled over many of them on foot. I had angles to the principal hills and the true bearing. The result was that Punto Castelho bore from my station on the Formigas S. 29° 05′ W., and Pico Alto S. 40° 38′ W. This was in the afternoon of the 17th August.

"I returned on board and determined the true bearings of all surrounding objects from the Styx, and found them agree perfectly with the true bearings obtained on the rocks. My true bearings of Castelho therefore differed from Tofino 4° 35′ more westerly, and Pico Alto 6° 08′ more westerly. This difference in bearing is on a distance of twenty-three miles.

"Although my observations on board the vessel with sextants perfectly confirmed the true bearing obtained with the theodolite, I was unwilling to think Tofino could be in error, I therefore landed again the next afternoon, a little later to have a lower altitude, and that second day's result was Pico Castelho S. 29° 2′ W., and Pico Alto S. 40° 36′ W. Tofino or his people are therefore in error. A beacon was put down on the south-east side of the shoal on which the Formigas stand, and every individual sounding is laid down by its own angles. Dollabarats Shoal is perfectly fixed. We anchored close to it, and scoured the ground with our boats. It is a fearful danger, the least water we found on it was eleven feet at low water. It is also a most insidious danger, only shewing itself when there is a high swell or sea.

"We searched in vain for Tullock's rocks, and I think he saw the Formigas and the shoals connected with them and none other. Here also Tofino has done wrong. In his Derrotero he says, 'The pilots of the island of St. Mary agree that the Formigas are steep to, and that only on the south-east side is a shoal of some extent,' but he adds 'having surveyed and sounded them very diligently with two of their pilots on board who sought for the least depth of water, we could no where find less than fifteen fathoms.' So although he had

a frigate, two brigantines, and two Portuguese pilots he could not, and did not find the shoal! He must have had fine weather, for it breaks when there is any sea."

We have quoted Capt. Vidal's words, who again has quoted Tofino's on this subject, because it is one of great moment to seamen and the authority for altering the position of a danger which all the world has received as correct for many years, from so high a source as Tifino, cannot be too seriously treated. And in the interval which will elapse before the appearance of Capt. Vidal's chart, we recommend our seamen, to lay down the Formigas from the true bearings reversed from the two points of St. Mary. They will find that they place this danger about three minutes of longitude to the eastward of its present position and in the same latitude. Dollabarats Shoal bears S. 44° E., true, from the Formigon distant three and a half miles, and is in latitude 37° 13′ 30″ N.

Since the foregoing was written, the following paragraph has appeared in the *Shipping Gazette*:—

"Notice to Mariners,—*Lisbon, Dec. 6th.*—A notice has been issued by the Minister of Marine to the effect that a shoal with 11½ feet water on it, has been discovered about 4 miles to the south-eastward of the "Formigas," or Great Formiga Rock, in the vicinity of the Azore Islands. The same notice states that further particulars will hereafter be given, the Government having ordered a more minute survey to be made."

The shoal here alluded to with 11½ feet water, is evidently Dollabarat Shoal, the position of which it has fallen to Capt. Vidal to establish, and to confirm the excellent account given of it by its discoverer, and which has been preserved by the late Mr. Purdy in his valuable *Atlantic Memoir* as follows.

"To the S.S.E. of the Formigas there is a danger, which was shewn on a chart of the Atlantic Ocean 1766, but afterwards omitted in other charts, from want of positive information as to its existence. This shoal was seen by P. Dollabarats, Commander of the ship La Marie de Laboure in 1788, on his return from Martinique to Bayonne. On the 7th of March at 3 p.m. when about to double the Formigas at the distance of three-quarters of a league he descried a breaker to the south-east of his ship, which appeared to extend a league north and south. He observed that it lies S.E. 5° S. (true) at the distance of one and half league from the Formigas."—*Atlantic Memoir, p. 357, Eighth Edition.*"

Light on the Hanstholms, *North-west Coast of Jutland.*—On the 15th of December, this year, a reverberatory lentil light will be placed on the Hanstholms, on the north-west point of Jutland, in long. 8° 36′ 10″, lat. 57° 6′ 50″ N., the light-house which contains the same being 57 feet, and the light 212 feet above the level of the sea. This light will show a flash of 15 seconds duration every half minute, and will, therefore, be easily distinguished from the Scaw Light, which is a fixed one, as well as from the Norwegian Light on Oxoe, which is varied by flashes every fourth minute.

This light will be discernible at the distance of four or five miles Danish (16 or 20 English), and will be lit so early every morning that it will be burning from the vernal to the autumnal equinox one hour, and from the autumnal to the vernal equinox half an hour after sunset until sunrise.—*General Board of Customs and Commerce, Nov.* 11, 1843.—*Shipping Gazette.*

Rock in Braye Roads, *Near Alderney.*—There is a rock in the middle of Braye Roads, called the Half-tide Rock, which is extremely dangerous to all vessels coming into the roads, being in a direct line in or out of the harbour. Part of the rock is only visible at low water spring tides.—*Shipping Gazette.*

Directions for entering Two-fold Bay, Sydney.

Gentlemen.—As I consider it the duty of every master mariner to publish, for the benefit of his brother seamen, any information he may have obtained relative to nautical affairs, I am induced to make known, through the means of your widely-circulating journal, a land-mark called the Wanderer's Tower, which has recently been erected on Torarago Point, situated on the south side of Twofold Bay, in the vicinity of Boyd Town. This land-mark may easily be distinguished, in clear weather, at the distance of fifteen miles from the offing, and forms an excellent leading mark for this safe and commodious anchorage, and will doubtless be the means of many strangers seeking shelter there from the heavy gales which so frequently prevail on the Coast of New South Wales.

The following sailing directions for this place will probably prove acceptable to your nautical readers :—

With a leading wind, get the Wanderer's Tower to bear S.W.b.W. ½ W. by compass, and steer for it until you get well inside the heads, then either haul up to the northward for Snug Cove, or stand on, as circumstances may require, for the Whale Spit, off Torarago Point, which is plainly visible, and round it at the distance of about a quarter of a mile, and haul to southward into Nullica Bay, where there is good anchorage in from three to four fathoms water, sheltered from all winds, abreast the township of Boyd.

In working in there is no hidden danger, and a vessel may stand in on either side to within a quarter of a mile of the shore.

One great advantage this landmark possesses is, that it can generally be seen in weather when Mount Imlay is covered with fog.

I am, &c.,

John Thom,
Master of the brig William.

To the Editors of Sydney Herald.

The St. Augustine, *(F. I.) Herald* of the 17th inst., says "We mentioned in our last that three buoys had been placed on the bar at the entrance of this harbour. We have since been informed that two of them have broken from their moorings and have floated away. This being the case, the directions published are calculated to lead astray."

East India-House, Dec. 13th, 1843.

Notice is hereby given, that on and after the 1st day of January, 1844, a light will be exhibited on the New Lighthouse erected at Madras, immediately to the northward of the Walls of Fort St. George; and that on and after the said 1st day of January, 1844, the light heretofore and now exhibited on the Old lighthouse within the walls of Fort St. George, will be discontinued. The new light will be elevated 128 feet above the mean level of the sea, and may be seen from the deck of a ship at the distance of 20 miles. The light is of the "flashing description" and the duration of the flashes to that of the eclipses or dark periods is in the ratio of 2 to 3,—but as the nature of the motion is reciprocating instead of rotatory, the above ratio merely expresses the average proportion of the light and dark intervals which are themselves variable according to the position of the spectator. The rapidity of movement is so adjusted, that the duration of the flashes will vary from 0 sec. to 48 sec., and that of the Eclipses from 0 sec. to 72 sec, the sums of the duration of light and darkness bearing, however, in every position, the constant ratio of 2 to 3.

From the south-eastern extremity of the Pulicat Shoal the new lighthouse bears S. 23° W., and is distant 13 miles; but no ship or vessel, when hauling in from the northward for the Madras roadstead should bring the light to bear to the southward of S. 28° W., or S.S.W. ½ W., unless her position is well

ascertained. Commanders of vessels are hereby warned of the serious risk they incur by incautiously approaching the dangerous vicinity of the Pulicat Shoal, as hazy weather or other causes may obscure the light—true soundings, therefore, and a vigilant look out are imperatively called for. The limits of the Madras roadstead (in 8 or 9 fathoms) are comprised within the following bearings,—viz., from the northward the lighthouse will bear S. 56° W., and from the southward N. 81° W., or from S.W.b.W. to W. ¼ N.

The new lighthouse at Madras is in lat. 13° 5′ 10″ N., and in long. 80° 20′ east of Greenwich.

JAMES C. MELVILL, *Secretary.*

Trinity-House, London, December 15th, 1843.

COCKLE GAT, *Yarmouth Roads.*—Notice is hereby given that in fulfilment of the intention expressed in the advertisement from this house, bearing date the 29th ultimo, a floating light-vessel has been moored on the eastern side of the Cockle Gat, at the northern entrance into Yarmouth Roads, and mariners are to observe that a bright revolving light will be exhibited on board the same on the evening of Wednesday, the 20th inst., and thenceforth continued nightly, from sun-set to sun-rise.

The said vessel is moored in 7 fathoms at Low water spring tides, and lies with the following marks and Compass bearings, viz. :—

Caistor S.E. Windmill in line with Caistor Preventive Station house	S.W.b.W.¼ W.
Winterton Church Tower, it's apparent width open west of the house on Winterton Cliff	N.W.½ W.
Cockle Fairway Buoy	N.W. ½ N.
Cockle Spit Buoy	W.½ N.
North Scroby Buoy	S.W.b.S.
Yarmouth Church Spire	S.W. Westerly.
Newarp Light Vessel	E.b.N. ¾ N.

Notice is also hereby given that the following alterations in the buoyage of the Cockle Gatway will be immediately carried into effect, viz. :—

Sea Heads Beacon buoy.—The position of the Sea Heads will be sufficiently marked by the Cockle light-vessel. The Beacon buoy heretofore at that station will, consequently, be taken away and discontinued.

North Scroby buoy.—This buoy, which will in future be distinguished by a Staff and Ball, has been removed one half mile to the N.N.E. into 4 fathoms at Low water spring tides on the North end of the sand.—and with the following marks and Compass bearings, viz, :—

A chimney in the Marshes on with the North end of Three Cottages to the southward of Caistor Point,	S.W.b.W. ¾ W.
A small red tiled House on the Cliff midway between Martham and Hemsby Churches	N.W. ¼ W.
Winterton Light House midway between the Church and house on Winterton Cliff	N.N.W. ¾ W.
Cockle Spit buoy	N. ½ W.
S.W. Cockle buoy	N.W.b.W. ¾ W.
Middle Scroby buoy	S.S.W. ½ W.
Outer Barber buoy	W. ¾ S.

Additional buoy on the Scroby.—An additional White buoy has been placed about midway between the North Scroby Beacon buoy above described, and the former Middle Scroby buoy,—which last mentioned buoy will henceforth be called the "West Scroby."

This additional buoy, now the "Middle Scroby," lies in 5½ fathoms at Low water spring tides, and with the following marks and compass bearings, viz. :—

Caistor Church midway between the Preventative House and Black Boat house	W.b.N. ¼ N.

Yarmouth New Church Tower, its apparent width open South of the highest Windmill on the Denes	S.W.b.W.
Yarmouth Church Spire	S.W.b.W. ¼ W.
West Scroby buoy	S.W.b.S.
Inner Barber buoy	N.W. ¼ W.
S.W. Cockle buoy	North
Cockle Spit buoy	N.b.E. ¼ E.
North Scroby buoy	N.N.E. ¼ E.
Cockle Light Vessel	N.N.E. ¾ E.
Winterton Church	N.b.W. ¾ W.

The Corporation deem it proper to direct the particular attention of Mariners to the relative positions of the Light Vessel and Buoys as above stated, by which they will perceive that the width of the Channel between the Cockle Light Vessel and the Cockle Spit buoy is no more than 7-10ths of a mile; and great caution should therefore be at all times observed in approaching and navigating this Gatway.

By Order, J. HERBERT, *Secretary.*

Trinity-house, London, December 16th, 1843.

CHRISTCHURCH LEDGE.—Notice is hereby given, That this Corporation has caused a black buoy, marked "Christchurch Ledge," to be placed in 3¾ fathoms at low water spring tides, at the south eastern extremity of the said Ledge, and with the following marks and Compass bearings, viz.:—

Sun Corner, over the inner part of the Middle Needle Rock	S.E.
The top of Christchurch Tower over a Cavern in the Head	N. b. W. ¾ W.
The Northern part of the Trees over Sconce Point, a ship's length open to the southward of the Hurst Low Light House	E. b. S. ¾ S.

By Order, J. HERBERT, *Secretary.*

Trinity-house, London, December 18th, 1843.

RIDGE SAND, OFF ALDBRO.'—This shoal having rapidly extended itself to the south-eastward, the buoy thereat has been moved farther out in that direction, and now lies in 4 fathoms at low water spring tides at the eastern edge of the shoals, and with the following marks and Compass bearings, viz.:—

Orford Church and Castle in one	W. ½ N.
A small red tiled house, being the Uppermost or Westernmost House at Slaughden, touching the eastern part of a remarkable Grove of Trees	N. ½ W.
Orford High Light House	nearly W.S.W.
Aldbro' Church	N. ½ E.

By Order, J. HERBERT, *Secretary.*

LASCAR SEAMEN.—On Saturday an inquest was held on board the Thames East Indiaman, now lying in the East India Docks, on the body of a Lascar seaman named Mamarie, aged 36, alleged to have died from want of medical assistance. The stench emitted from the cabin in which the body lay, and in which the Lascars slept during the voyage, was so great, that the jury were unable to remain in it more than a few seconds. The Thames was the property of Mr. Green, of Bristol. On leaving Calcutta there were 95 Lascars on board, but 23 had died from scurvy and dysentery on the voyage homewards. The surgeon on board left the ship along with the captain on her reaching Margate, without providing medical treatment for any of the crew who might be sick. The Lascars lived on fish, rice, and split peas, but had no meat. The deceased

had been ill about four days, and on Friday was found dead in bed. Several of the jury severely animadverted on the treatment the Lascar seamen received, and the coroner said it was the duty of the owners to provide medical assistance, and should death ensue in consequence of not having it, they were guilty of manslaughter. The chief mate, in reply to the question, said there were 20 Lascars now ill on board without medical attendance, and it was not unusual for a great many Lascars to die during the voyage. They have no hammocks to lie upon, but only rugs, which they find themselves. Mr. H. Bloomfield, surgeon, said he had been on board the vessel, and had seen the body. He was of opinion that consumption was the cause of death. He had examined all the crew, but there was no evidence of dysentery being prevalent on board. With the exception of about four, nearly the whole were suffering from scurvy; four or five of them so bad that he could remove their teeth with the greatest ease. This he should say was caused by diet. The Coroner said they must adjourn for the attendance of the owners, and also for a *post mortem* examination, as it was necessary that the most searching investigation should be pursued, for if death was proved to have resulted either from the neglect of the captain or the owner, it amounted to manslaughter.—*Times, Nov. 20th.*

At the adjourned inquest, the jury, after some consideration, returned the following verdict:—"We find that the deceased died from natural causes, but consider that there was great want of caution on the part of the managers in not providing medical attendance on the arrival of the ship in the East India Docks, and also a place distinct from the part of the ship occupied by the deceased and others of the crew, which was found to be in a most unwholesome and filthy state."

The coroner advised the commander to be more careful in future, as although death might not be caused by ill-treatment, still it was the law, that if a person undertook to provide for another, and neglected to do so, it was manslaughter.

Edwards' Patent Preserved Potato.

Scurvy.—The foregoing case, which has appeared in our Police Reports, certainly does not add to the character of our merchant shipping, in regard to dieting the crew; but it gives us the opportunity of again calling attention to Messrs. Edwards' Patent Preserved Potato, the *cheap* preventative for such cases, that we have always said should be well supplied to all seagoing ships, and of pointing out the favorable opinion entertained of it by the highest medical authority in the China Seas.

Extract of a Special Report from Dr. Wilson, Inspector of Hospitals, &c., dated on board H.M. Hospital Ship Minden, at Chusan, April 17th, 1843, and addressed to Vice-Admiral Sir Wm. Parker, the Commander-in-Chief, China and East Indies.

"Respecting their general merits as an article of ration, I express the opinion so far as I have had the means of judging, that they possess valuable qualities; they have the general characteristic of containing a large portion of nutriment, are easily cooked, and which is of much consequence as an article of diet, are palatable."

Errata in the Second Edition of the Practice of Navigation.

By Lieut. Raper, R.N

(Continued from p. 783, vol. for 1843.)

Page 73-4, Ex. 2. *alter* Dep. 66.5 *to* 173.7, and the D. Long. to 201, or 3° 21′ 85, No. 249, (2) the rule for the long. is adapted only to the place in the greater colat.

Page 169, Ex. 4, *alter* 6° 48′ to 6° 53′, and 6° 46′ *to* 6° 55′.
172, top Ex. 2, *alter* 5h. 24m. *to* 5h. 54m.
179, Ex. 2, *alter* long. 36° E. *to* 24° 20′ W.
———— end, *alter* Nov. 5th, *to* 6th.
192, Ex. 1, *alter* Ind. Corr. + 3′ *to* + 2′.
No. 522, Ex. 2nd column, *alter* 56° 50′ *to* 36° 50′.
193, Ex. 3rd line, *alter* 10h. 8m. 4s. *to* 10h. 18m. 4s.
243, Ex. the prop. log. of 14m. 13s. should be 1025, not 1205; it is not worth while to make the corrections.
255, Ex. 2nd, col. *alter* the sign in 2.3 + 9.1 *to* 2.3 × 9.1.
271, top 2nd col. *alter* ☽ 2nd, cor *to* ☽'s 2 corrs.
296, No. 764, Ex. 1, 2h. 10m. 51s. should be 2h. 19m. 51s. and 69° 10 should be 69° 19′, the rest is right.
298, Ex. last portion, *alter* the rem. 25° 54′ *to* 35° 54′.
324, No. 842, line 7, *alter* direction *to* deviation.
466, (14) 1, Horta, *alter* 28° 27′.7 *to* 28° 38′.5.
478, (38) 1, Great Corn. Id. *alter* 22° *to* 12°.

SICKNESS AT BERMUDA.—We could not find room for the following in our last. The troops have suffered considerable losses both of officers and men, and our ships have not escaped. Captain Barnett of H.M.S. Thunder, the senior-officer in port, finding his sick list fast increasing, adopted the expedient of moving his ship from the Basin to moorings two or three miles distant, and we are happy to state that this measure was successful, for no bad case of sickness occurred on board afterwards.

The medical officers of the Thunder and Lark have been constant and persevering in their attendance on the sick, on shore as well as on board. The assistant-surgeons of these vessels assisted at the Naval Hospital throughout the sickness, and happily escaped the disease from which the other medical men (Dr. King, the medical inspector excepted,) had experienced severe attacks.

Mr. Ferrier, the surgeon of the *Thunder*, who had been placed in medical charge of the troops on Ireland Island, performed his duties with so much satisfaction, and his uniform kindness and unwearied assiduity have been so fully appreciated by the soldiers under his care that they have presented him with a gold snuff-box in testimony of their gratitude and respect. We have great pleasure in recording an incident so generally interesting and so highly honourable to the parties concerned.

FURTHER ERRATA IN OUR LAST VOLUME.

Page 22, line and *for* $(\frac{1}{2}\,n + p^2) - \frac{1}{2}\,n^2 \times \frac{1}{2}\,r = x$, *read* $(\frac{1}{2}\,n + p)^2 - \frac{1}{2}\,n2 \times \frac{1}{2}\,r = x$.
522, line 13, for Melurda *read* Melinda.
592, for Tankin-in *read* Tonkin-in.
595, "for the same manner in which a fluid differs from fluid at rest, *read* in the same manner in which a fluid in motion differs from a fluid at rest."
649, line 9, for north ends pointing *read* north end pointing.
line 17, for as well upon, *read* as well as upon.
653, line 12, for the north point, and because, *read* the north point because.
724, line 31, for as in the case, *read* as is the case.
728, line 27, for north-east coast, *read* north-east course.
line 38, for instances or errors *read* instances of errors.
788, line 13, for deteriobe rated *read* be deteriorated.

Wrecks of British Shipping.

(cs. crew saved—d. drowned.)

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Albion		———	Ray	Liverpool	Brake	Accumersail	Nov. 9 cs
Barbara		———	Elliot	Sunderland	run foul of	and sunk	Sept. 20.
Caledonia		Halifax	———	Liverpool	Halifax	Rocky Bay	Nov. cs
Canton		———	Fowler	St. Peters	———	Green S.	Oct. 29. cs
Castle Tioram	5	Newfondlnd	Fox	Plymouth	Hamburgh	Denmark	Nov. 28.
Cato		Sunderland	Smith	Sunderland	———	abandoned	Nov. 22. cs
Challenger		London	Jones	Smyrna	London	Nun Deeps	Nov. 21. cs
Charlotte		———	Tyson	Petersburg	Liverpool	Brekkertoe	Nov. 18. 5d
City of Durham		Hartlepool	———	———	Riga	Off Windan	Oct. cs
Comet	10	Hull	Wright	Quebec	Hull	Hasbro' S.	Dec. 1. cs
Dampier		Whitby	Foster	Hartlepool	London	abandoned	Dec. 23. cs
Daphne		Whitby	Robinson	Sunderland	Foundered	off Flambro'	Sept. cs
Ebenezer		Newport	———	———	Liverpool	Fishguard	Nov. 17.
Emerentine		———	———	Anticosti	Chaleur B.	Anticosti	fall of 1842
Endeavour	15	———	Todd	Sunderland	Antwerp	abandoned	Nov. 10. cs
Glasgow		———	Lyall	Hamburg	Leith	Off Leith	Nov. 25.
Hetty Clifton		———	———	Dundalk	Preston	Formby C.	Nov. 7. cs
Hilda		Whitby	Jackson	———	———	Kahno I.	Oct. 14.
Imperator		———	Drews	Stettin	———	———	Oct. 3.
Islay	20	Sligo	Galt	———	Sydney	near Madura	July 26. cs
Java		N. Shields	Young	Quebec	Chatham	C. Chat	Nov. 6. cs
John and James		———	Elliott	Calcutta	London	Walkers B.	Sept. cs.
Jupiter		Newport	Davies	———	———	St. Bride B.	Sept. 30.cs
Laura		———	———	———	———	Algoa B.	Aug. 26. 5d
Lord Lowther	25	———	Dudman	Bombay	China	S. Sands	Aug. 27.
Lyra		———	Campbell	Sunderland	Rouen	———	Nov. 17.
Malvina		———	Power	Labrador	Chaleur B.	Mirmichi	Oct. 7. cs
Mary		London	Roberts	Dantzic	Portsmouth	Nidinger R.	Oct. 31. cs
Mary		———	Armitage	Goole	Lynn	Lynn W.	Oct. 23. cs
Memnon	30	———	———	Bombay	Suez	C. Guardfui	———
Nelson Wood		Maryport	Ervln	Demerara	Liverpool	Conemara	Nov. 27. 9d
Newland		Newcastle	Robson	Wyburg	Newcastle	Off Ysted	Nov. 17. cs
Oak		Arundel	Williams	———	———	———	Nov. 26. cs
Olive Branch		———	Foster	Saguenay	London	by fire	Nov. 6. cs
Premier, tran.	35	———	———	Quebec	Barbados	C. Chat	Nov. 4, cs
Princess Royal		———	Crabtree	Goole	London	foundered	Nov. 30. cs
Rising Sun		———	Williams	Laguna	Liverpool	Alacranes	Oct. 8. cs
Ritchie		———	Kerr	———	———	Lamlash	Nov.
Robert Munro		Kirkaldy	abandoned	38° N.	2° 5′ E.	———	Oct.
Rosalind	40	———	———	M. Video	Rio Janeiro	St.Catharine	Aug. 1. cs
Sarah andMary Ann		———	Lister	Mirimichi	Maryport	abandoned	Nov. 17.
Sarah, steamer		Sunderland	Boiler	———	———	Sunderland	Dec. 2.
Seaflower		———	Muirhead	St. Peters	Mirmichi	abandoned	Oct. 2. cs
Sibella		———	———	Sidney	Boston	Arichat	Nov. 1.
St. George	45	Guernsey	Moore	St. Lucia	Liverpool	Bideford	Oct. 1. cs
Superb		Sunderland	———	Hull	Brenesm	abandoned	Nov. 9.
Thistle		———	Alexander	Grangem'th	Rotterdam	Cromer K.	Nov. 21. cs
Traveller		———	Roberts	Palermo	Cafala	Cafala	Nov. 18. cs
Treasurer		———	Kennison	Newfundlnd	Halifax	Newfundl'nd	Oct.
Two Sisters	50	Conway	———	Havre	Dublin	Rundlestone	Nov. 10. cs
Vestal		———	Mosey	London	Corfu	Off Cephlona	Oct. 23. cs
Wm. Thompson		Sunderland	Young	———	coast near	Alexandria	Aug. 1.
Zeno	53	———	———	Liverpool	Jamaic	Blackwater	Dec. 1. cs

5.—On west coast, about 60 miles from Ribe. Part of the crew, and 22 fishermen, who were rendering assistance, were drowned; 5 of the crew saved.

6.—Struck by a sea, and foundered in Robin Hood Bay.

7.—Crew landed on Bryher Island, and the island in consequence placed in quarantine.

11.—Dismasted, sprung a leak, and left in a sinking state; crew landed at Embden.

12.—Sprung a leak and foundered; crew took to boat, "kept as near the unfortunate brig as was considered prudent being anxious to learn her actual fate; and at about one o'clock on Wednesday morning she foundered in deep water, about ten miles off Flamboro' Head; boat steered for the land,—picked up by a Sunderland trader, and landed in Robin Hood Bay. The brig is stated to be partially insured."—Liverpool Journal, Sept. 23rd.

14.—Sprung a leak and sunk; crew taken to Quebec by brig Derwent, Nelson.

15.—Crew saved and arrived at Antwerp in the Active, Peterson.

19.—Pieces of her wreck and papers drifted on shore near Havalorn, Frederickstadt.

24.—In a severe hurricane which visited Port Elizabeth, and which the Graham's Town Journal says, will be long remembered from its lamentable destruction of life and property. We extract the following:—"Five lives have been lost from the Laura, five from the Sea

Gull, and one from the Delhi, and up to the present time only one body has been found. The largest and most valuable half of the Jetty has been destroyed, and the whole structure rendered useless. The amount of property lost cannot be far short of £30,000. Eight vessels rode the gale out,—but had it not providentially moderated on Saturday morning, at least four more would have been on shore, as they were riding by single anchors.

25.—Run foul of by the Hampshire, Gaines, of Portsmouth; struck on starboard bow, foremost fell on boat, rendered it useless. In three minutes the vessel sinking,—master jumped overboard with a quarter-board and floated; two perished in vessel; mate overboard with a spar. A light brig passed without notice. Picked up by Eleanor of Dover, and landed at Sunderland.

29.—Sprung a leak and sunk.

36.—Shipped a heavy sea off Clay,—broke in her hatchways.

39.—Crew saved by schooner Ann, Campbell.

41.—Drifted on shore near Whitehaven.

47.—Crew took to boat, exposed thirty hours to tempestuous weather, and picked up by the Risk, Kidd, of Sunderland; landed at Grimsby.

5—Laden with Ordnance Stores. In bad weather sprung a leak and foundered; crew saved by boats.

Loss of the Margaret and other Vessels near Alexandria.

Foreign Office, Nov. 24.

Sir.—I am directed by the Earl of Aberdeen to transmit to you, for the information of the chairman and committee of Lloyd's, a copy of a dispatch from her Majesty's Consul at Alexandria, reporting the stranding of the schooner Margaret, on the coast of Africa, and also calling attention to the number of wrecks of British vessels which have taken place on that coast within the last year and a half.

I am, &c.,

To W. Dobson, Esq. H. W. Addington.

H. M. British Consulate, Alexandria, Nov. 28, 1843.

Sir.—I have the honour to inform you that the master and crew of the schooner Margaret, bound from Liverpool to this port, reached Alexandria on the 24th inst. and reported that their vessel had been stranded during the night of the 20th inst. on the coast of Africa, at about 35 miles to the west of Alexandria. Finding it impossible to get the vessel off, and the armed Arabs assembling about her in great numbers, the master and crew quitted for their own safety.

I think it necessary to call attention to the frequent wrecks of British vessels which within the last year and a half have taken place on the African coast, westward of this place. They have been as follows:—

June 19, 1842.—The brig Ontario, of Newcastle, Smart, master, with a cargo of bones, at twelve hours from Alexandria.

Aug. 1, 1843.—The brig William Thompson, of Sunderland, Young, master, with a cargo of cotton, at from 35 to 40 miles west of the Arab's Tower.

Oct. 20, 1843.—The schooner Margaret, of Liverpool, Mollard, master, with a cargo of cotton goods, at about 250 miles west of Alexandria.

The coast on which these misfortunes have taken place is not considered to be in the proper course of ships sailing to or from this port, and though two masters in their protests suggest the possible existence of an unknown current, it may be doubted whether such explanation is sufficient.

I neither recollect, nor have I heard of, any other European vessels than British being stranded in the same localities; at least, such accidents must be very rare to them.

I am, &c.,

To J. Bidwell, Esq. J. L. Stoddart.

New Books.

The Life, Voyages, and Exploits of Admiral Sir Francis Drake.—*By John Barrow, Esq.*, 1 *vol.* 8*vo.*—Murray.—(Continued.)

The leading events in the life of Sir Francis Drake may be briefly told.

Of humble birth, and one of twelve sons, he was apprenticed to the master of a small coasting vessel; the master on departing this life, left his little barque to Drake, who had completely won his regard by his activity and uniform zeal; but his great mind could not be confined to mere coasting voyages, and we find him shortly afterwards in 1567, on his way to the West Indies, with his friend Captain John Hawkins, (which, through the treachery of the Spaniards, proved a disastrous voyage,) who in the quaint language of his time, says in his letter to Sir William Cycylle, "If I shold wryt of all our calamytyes, I am sure a volume as great as the Byble wyll scarcelie suffyce." There appears to have been some smart firing at St. Juan d' Ulloa, in which the Jesus of Lubeck had "five shotte through her main mast; her foremast strooke in sunder under the hounds wyth a chaynce shotte, and her hull wonderfully pearced with shotte." "Our General (Hawkins) courageously cheered up his soldiers and gunners, and called to Samuel, his page, for a cup of beere, who brought it him in a silver cup; and hee drinking to all men, willed the gunners to stand by their ordinance, lustily like men."

In 1572 Drake made another voyage to the West Indies, and Spanish main, and attacked Nombre de Dios, where he was severely wounded. On this voyage, though he made several profitable captures of vessels he had the misfortune to lose two of his brothers. One (John Drake) was killed in a gallant attack on a large frigate.

"The manner of it, as we learned from examination of the company, was this: when they saw the frigate at sea, the company were very importunate on him to give chase and set upon this frigate, which they deemed had been a fit booty for them, but he told them that they wanted weapons to assail: they knew not how the frigate was provided. But this would not satisfy them: they still urged him with words and supposals; 'if ye will needs (said he) adventure, it shall never be said that I will be hindmost, neither shall you report to my brother that you lost your voyage by any cowardice you found in me.*

"Thereupon every man shifted as he might for the time, and heaving the planks overboard, they took such few weapons as they had: namely, a broken pointed rapier, one old fisgee, and a rusty calliver: John Drake took the rapier, and made a gauntlet of his pillow: Richard Allen took the fisgee, both standing at the head of their pinnace, called the Lion: Robert Cluich took the calliver, and so boarded. But they found the frigate armed round about with a close fight of hides, full of pikes and callivers, which were discharged in their faces, and deadly wounded those that were in the foreship: John Drake in his belly, and Richard Allen in his head. But notwithstanding their wounds they, with care, shifted off the pinnace and got clear of the frigate, and with all haste recovered their ship; where, within an hour after, this young man of great hope ended his days, greatly lamented of all the company."†

Joseph Drake died of disease:—

"Six of the company fell sick and died within two or three days, yea, they had thirty at a time sick of a calenture, occasioned by a sudden change from cold to heat, or from salt to brackish water, taken in at the mouth of the river, by the sloth of those seamen who would not go further up. 'Among the rest,' says the 'Relation,' 'Joseph Drake, another of our Captain's brothers, died in our Captain's arms of the same disease, of which that the cause might be the better discerned, and consequently remedied to the relief of others, by our Captain's appointment, he was ript open by the surgeon, who found his liver swollen, his heart as it were sodden, and his gutts all fair. This was the first and last experiment that our Captain made of anatomy in this voyage.'‡

"The surgeon that cut him up overlived him not past four days, although he were not toucht with that sickness of which he had been recovered a month before, but only of an overbold practice which he must needs make upon himself, by receiving an over-strong purgation of his own device, after which, once

* Sloane MSS. † Sloane MSS. ‡ Sloane MSS.

taken, he never spake, nor did his boy recover the health which he lost by tasting it, till he saw England."*

From 1577 to 1580 Sir Francis Drake was employed on his celebrated voyage round the world; on his return from which he was honored with knighthood by the Queen, who visited his ship at Deptford. "An honor," says Dr. Johnson, "in that illustrious reign, not made cheap by prostitution, nor ever bestowed without uncommon merit."

In 1585 he again went to the West Indies, and in 1588 was actively employed on the occasion of the invasion of England by the "miscalled *Invincible* Armada."

In this part of the volume Mr. Barrow has introduced many most interesting letters of Drake's, and of the Lord High Admiral's, which have not before been published, having obtained them chiefly at the State Paper Office. He has also inserted several extracts from a Spanish narrative, written at the time, by an officer in one of the Spanish ships.

In speaking of the defeat of the *Invincible* Armada, Mr. Barrow says,—

"The disasters and distress of the Armada in its passage along the western coast of Ireland were most deplorable. The loss of Officers and men by shipwreck and sickness, and the destruction of their ships, exceeded in a great degree all their misfortunes and discomfiture in the English Channel and the North Sea. By an account taken apparently with great care, after a minute examination of various parties in different parts of the coast of Ireland it appears that—

	Ships.	Men.
On the west coast of Ireland there where wrecked and destroyed	17	5394
In the British Channel and the North Sea it was estimated	15	4791
Total	32	10,185

exclusive of those who were slain in fight, and died of sickness and famine.

"But it is said, apparently on good authority, that the utmost number of ships that reached the Spanish ports did not exceed sixty, and these generally in a very shattered condition. Stow makes the loss much greater; and Harris and Hakluyt say: 'Of one hundred and four and thirty sail, that came out of Lisbon, only three and fifty returned to Spain. Of the four galiasses of Naples, but one; the like of the four largest galleons of Portugal; of the one and ninety galleons and great hulks, from divers provinces, only three and thirty returned. In a word, they lost eighty-one ships in this expedition, and upwards of thirteen thousand five hundred soldiers.'†

"It may easily be conceived how severe the shock must have been to Philip, on receiving the melancholy intelligence of the defeat and disasters of his *Invincible* Armada; and, with it, the destruction of those delusive hopes he had been led to entertain of the conquest of England, and the extirpation of her heretical church. He is said, however, to have borne his dissappointment like a true Christian, by humbling himself on his knees, and returning thanks to God that it was no worse. He could not, however, overlook the conduct of those, who had caused his orders for the fleet to be disregarded, the Duke of Medina Sidonia in particular, against whom his anger was so much excited—that he gave orders he should never again appear at court; but the duchess, who was a beautiful lady, and a great favourite with the king, prevailed on his Majesty to rescind the order, and again to receive him into favour. As for Don Diego de Valdez, who was the person to mislead the Duke, he was sentenced to be imprisoned in the castle of Saint Andrea, where Sir William Monson says, 'He was never seen nor heard of after, as was told me by his page, who was my fellow prisoner at Lisbon.' The other de Valdez, (Don Pedro) remained a prisoner in England between two and three years, and was only released on a ransom of about 3000*l*.'

* Sloane MSS † Hakluyt.—Lediard.

"But how different was the conduct of the conclave of the Vatican from that of the King! His Holiness the Pope, the cardinals, and priests, monks, and Jesuits, were exasperated beyond bounds, not perhaps so much at the defeat of the Armada, which they had pronounced Invincible, as the falsification of their sinister prophecies regarding England, and the detection of the lies which they had caused to be circulated throughout Europe.

"The conduct of one person, however, was utterly unintelligible. The defeat of the Armada was known in Paris immediately after the dispersion of the fleet by the fire-ships off Calais; yet after it was so known, Mendoza, the late ambassador to London, kept his printing-press at work to disseminate lies against the Queen, the Lord High Admiral, and Sir Francis Drake. He was admonished by one of his own friends, one of the same religious persuasion with himself, of the impropriety and impolicy of his conduct. 'I marvel, good Sir,' (he says) 'to see a man of so noble a lineage, and no less endued with gifts of nature than others, should have your eare so opened to hear the rumours and lies which the scoffing and gibing flatterers do write you; and I wonder not so much in that you credit them, as at the speed wherewith your honour doth write them. Your honour writeth to Spain that it is a matter most true that the Lord High Admiral was come, running away with twenty-five or twenty-six ships, unto London, and that he had lost his flag-ship; and that Drake was taken prisoner; and that this was written for a matter most certain by persons of credit from London.'*

"Though Drake very rarely gave himself the trouble to answer personal abuse, yet, on the present occasion, his anger got the better of his usual habit, and he published a letter, which proves that he was no less able to vanquish a libeller with his pen than an enemy with his sword. But let Stow introduce this admirable letter of Drake:—

"But however coolly Philip might take the disastrous account of his Armada, his ambassador in France, Don Bernardin Mendoza, and his tool, one Capella, were industrious enough to spread false reports in print, claiming a victory for Spain. So blindly did his impudence and indignation carry him, that he dispersed his lies in French, Italian, and Spanish, pretending he had received advices from London, that the Queen's High Admiral had been taken by the Spanish Admiral, and that he saved himself in a boat, and that Drake was either taken or slain; that the Catholics, perceiving her navy to be spoiled, had made a mutiny, which induced the Queen to take the field in person, and that it is affirmed, as true, that no ship nor boat of the Spaniards had been carried into England, except the ship of Don Pedro de Valdez.'†

"Mendoza was, in fact, known to be the regular channel for the circulation of falsehoods throughout Europe. 'This fabulous gazette of Don Bernardin was reprinted in England, and exposed under the title of 'A pack of Spanish Lies,' sent abroad into the world, translated out of the original, and now ripp'd up, unfolded, and by just examination, condemned, as containing false, corrupt, and detestable wares, worthy to be damn'd and burnt.'‡

"It is not easy," (continues Stow,) "to conceive that a man in the high station of Ambassador should be the means of circulating through the Continent of Europe these base lies which he so well knew to be such. But they drew from Drake a letter full of truth, and with the spirit of honest indignation completely refuted the falsehoods of the swaggering Spaniard.§

"They were not ashamed," says Drake, "to publish in sundry languages in print, great victories in words, which they pretended to have obtained against this realm, and spread the same in a most false sort over all parts of France, Italy, and elsewhere; when, shortly after, it was happily manifested in very deed to all nations, how their navy, which they termed invincible, consisting of one hundred and forty sail of ships, not only of their own kingdom, but strengthened with the greatest Argosies, Portugal carracks, Floren-

* Strype. † Stow's Annals. ‡ Lord Somers' Tracts. § Stow.

tines, and large hulks of other countries, were, by thirty of Her Majesty's own ships of war, and a few of our merchants, by the wise, valiant, and advantageous conduct of the Lord Charles Howard, High Admiral of England, beaten and shuffled together even from the Lizard in Cornwall, first to Portland, where they shamefully left Don Pedro de Valdez, with his mighty ship; from Portland to Calais, where they lost Hugh de Moncado, with the galleys of which he was captain; and from Calais, driven with squibs from their anchors, were chased out of the sight of England round about Scotland and Ireland; where, for the sympathy of their religion, hoping to find succour and assistance, a great part of them were crushed against the rocks and those other that landed, being very many in number, were, notwithstanding, broken, slain, and taken; and so sent from village to village, coupled in haltars to be shipped into England, where Her Majesty, of her princely and invincible disposition disdaining to put them to death, and scorning either to retain, or entertain them, they were all sent back again to their countries to witness and recount the worthy achievement of their invincible and dreadful navy. Of which the number of soldiers, the fearful burthen of their ships, and the commander's names of every squadron, with all other, their magazines of provisions, were put in print, as an army and navy irresistable and disdaining prevention; with all which their great terrible ostentation they did not, in all their sailing round about England, so much as sink or take one ship, bark, pinnace, or cockboat of ours, or even burn so much as one sheepcote on this land."*

Drake now went on an expedition to Corunna, and in 1590 on a voyage to the Spanish Colonies, and 1595 "departed this life havinge beene extremely sicke of a fluxe." His friend and patron, Hawkins, well advanced in years, died also on this voyage, and both met with a sailor's funeral, "the waves their winding sheet."

HINTS ON SEA RISKS.—*By E. Jennings, Lieut., R.N.*—Bate, Poultry.

With that correct feeling for the benefit of his brother seamen, and an interest in the advancement of their noble profession which no one can help imbibing as he grows up in it, Lieutenant Jennings has strung together a vast number of excellent, and useful maxims, which we heartily recommend to their attentive consideration. They are valuable results gained from the experience of a long series of years, and cannot fail of producing the good intended, if the high price which their author has placed on them does not prevent it.

We recommend this to his serious attention, and shall hereafter take an opportunity of making some extracts from them.

H.M.S. PENELOPE AND THE PRINCESS ROYAL EAST INDIAMAN.—Mr. T. G. Dutton has just produced two Sister prints of these vessels, finished with all the elegance which lithography can supply. They are both choice drawings and replete with good taste.

NEW CHARTS.

(*Published by the Admiralty, and sold by R. B. Bate, 21, Poultry, London.*)

SALAMIS, OR KOLOURI ISLAND.
PEIRŒUS, OR PORT DRAKO.
PORT ST. NIKOLAO, I. ZEA.

The foregoing from surveys by *Commander T. Graves, of H.M.S. Beacon*, in 1338 and 1840.

PSARA ISLAND, 1834.
GULF OF SCALA NUOVA, 1836; by *Commander Copeland.*

* Stow.

Tarbert Roads, 1841, and Foynes Harbour, 1841; by *Commander Wolfe.*
Grassholm Island, *with the Barrels, Hats, and Smalls; by Commander Sheringham,* in 1838.
Grand Port, Mauritius; by *Lieut.-Col. Lloyd,* in 1836.
Yarmouth Roads; by *Captain Washington and the Officers of H.M.S. Blazer.*

This last shewing the position of the New Light-vessel for the Cockle Gat, and the present depths in Yarmouth Roads, we recommend to the especial attention of our Eastern Coast traders.

Marine Glue,—*Further Experiments.*—Mr. Jeffery, the inventor, attended on Thursday at Woolwich dockyard to exhibit the application of his glue, and to shew the facility with which it might be used in cases of shipwreck or danger at sea, and in the construction of conveyances of men and ammunition, or other stores across rivers when engaged in warfare. The experiments took place in the presence of a number of Officers in the Naval and Military Services, and scientific gentlemen. Mr. Jeffery and his assistants commenced operations by unfolding several pieces of wood about an inch thick, joined together with hinges, and appeared like a folding fire-screen. Several smaller pieces were then attached with hooks and eyes, and the composition applied to the joints, and in 20 minutes a boat 12 feet long and 4 feet broad, and 20 inches deep was constructed and launched, having an air-tight space in the stern of 2½ cubic feet, and a similar air-tight space of 15 cubic feet in the fore part, for rendering it buoyant.

Immediately on its being launched, Lieutenant Nichols, commanding the Dwarf steamer, Mr. Jeffery, and two workmen went on board, and were rowed to the Hebe receiving-vessel, stationed in the middle of the river, and returned on shore, the whole time, from unpacking the pieces of wood to the end of the experiment only occupying about 35 minutes; and the vessel was taken on shore by two men without having leaked one drop of water. On being weighed at the machine, it was found to be 2 cwt. and 7 lbs.

Mr. Darling, from Devonport, who has been sent from that dockyard to receive instructions in the application of this Marine Glue, superintended the construction of the boat, and although it was the first time the experiment was tried, it answered satisfactorily, and afforded evidence of the simplicity of the application of the substance, and the uses to which it might be made an important auxiliary in cases of emergency. The boat remains in the Woolwich dockyard, and may be seen by those interested in Naval or Military subjects.

The East India Packet-Ship Oxford.—Intelligence has been received in the city of the total loss of the above ship, together with a cargo valued at nearly 20,000*l.* The Oxford, which was a new ship of 121 tons burthen, was the property of Messrs. Gilby and Scott; she sailed from Calcutta, on the 21st of July, and early on the morning of 1st Sept., when under press of sail with a sharp breeze, she struck violently on a reef of rocks, off the Island of Rodrigues, eastward of the Mauritius, and shortly afterwards became a complete wreck, and went to pieces. The crew, after every effort to save the ship, took to the boats, with four passengers, and were picked up by a vessel from Greenock, and landed at the Mauritius. A letter, describing the unfortunate occurrence, attributes it to a defect in the Admiralty charts, and states that H.M.S. *Isis,* Capt. Sir J. Marshall, was about proceeding to survey the reef off the Island of Rodrigues, where two vessels have been lost within a short space of time, (one the Queen Victoria,) their actual distance in length being between fifteen and sixteen miles; whereas they are laid down and described in the Admiralty chart as only five miles!—*Naval and Military Gazette.*

HURRICANE.—*Extract of a letter from Her Britannic Majesty's Consul at Carthagena, Oct.* 23. :—" On the morning of the 21st inst., a most awful catastrophe occurred here, within 200 yards of my balcony, and in sight of my house. About 4 o'clock in the morning most vivid lightning came on, with tremendous thunder—such lightning as was never seen at Carthagena within the memory of man. I left my bed, and proceeded to the window, where I had not been five minutes before I heard a great rushing of wind proceeding from the east, and I observed also a water-spout, which I no sooner saw than it burst, carrying with it into the air five large felucca boats, of 40 to 50 tons each, which fell into the water again, upside down, and of course sank, with the poor sailors on board, 15 of whom were drowned. It then proceeded in a north-west direction, unroofing houses, carrying off timber trees, and even rocks of great weight. This morning, two poor fellows, sailors, who belonged to one of the vessels, were found dead about a league from Carthagena, having been carried off and dropped by the whirlwind. On the mole were thrown huge stones; houses were demolished, and the roof of the Prisichi, where the convicts are confined, was completely carried away. You may well imagine the heart-rending cries of the poor mariners—O Dios mio. Strange, however, as it may seem, an English brig was at anchor within fifty yards of the spot where the water-spout burst, and sustained no damage whatever. I have just been informed that two of the feluccas only the day before brought 300 prisoners for political offences from Barcelona. Had I not been an eye-witness of this awful visitation, I could not have believed it.—*Naval and Military Gazette.*

THE PLYMOUTH BREAKWATER.—The last stone of the lighthouse tower, at the western end of this stupendous sea-barrier, was set on the 9th Nov., by the Rear-Admiral Superintendant of the Dockyard, Sir Samuel Pym, who proceeded to the spot, accompanied by his secretary, and his flag Lieutenant, Mr. Potbury. Captain Milne, of the *Caledonia*, was also present. The tower is 122 feet in height from the level of the bottom of the sea, and 56 feet from the level surface of the breakwater. It is composed of 31 courses of large blocks of dressed granite, the first of which was laid by the late superintendant of the Dockyard, Vice-Admiral Warren, on 22d Feb. 1841. The lighthouse is divided into five stories, in which are an oil-room, a store-room, a dwelling-room, a bed-room, and a watch-room. It has 14 windows, seven of which are in the watch-room, the frames being constructed of bell-metal, as are also the outer doors. The lantern is the only thing now necessary to complete it for service, which it is expected will be ready to be brought into use early in the next year, when it will supersede the old light vessel which has been moored in the sound ever since 1813. After the interesting operation had been concluded by the gallant Admiral, the assembled workmen gave three cheers each for Her Majesty and Prince Albert; and it being the birthday of his Royal Highness the Prince of Wales, three hearty cheers were added, after which Sir S. Pym was greeted with the like honor.

BIOGRAPHICAL MEMOIR.

ADMIRAL SIR GRAHAM MOORE.—(See Obituary.)—Was the third son of Dr. Moore, by the daughter of Professor Simpson, of Glasgow, and brother to Sir John Moore, who fell at Corunna. Married in 1812, a daughter of the late Thos. Eden, Esq., neice of the first Lord Auckland, and sister to Lady Brougham. Entered the navy in 1771; and in 1795 assisted at the capture of ten vessels, laden with naval stores; in 1804 he commanded a squadron of frigates, when he captured four Spanish treasure ships. Was afterwards engaged in escorting the royal family of Portugal from Lisbon to Brazil, for which he received the order of the Tower and Sword; became Admiral of the the White, November 1841; was a Lord of the Admiralty from 1816 to 1820; was appointed 1839 Commander-in-Chief at Plymouth, in which he was succeeded last year by Admiral Sir David Milne; created a Grand Cross of the Bath in 1836: and Knight Grand Cross of St. Michael and St. George in 1839.

Promotions and Appointments.

(From the Naval and Military Gazette.)

PROMOTIONS.

Commanders—C. W. Mathison, Sir W. Hoste, Bart., J. Moore.

Lieutenants—J. W. Whyte, C. E. Rowley, F. Willoughby, C. A. D. Pasco, C. Hawkey, T. Belgrave, R. B. Creyke, R. J. D. Waddilove, R. Wall.

APPOINTMENTS.

Captains—H. Austin, CB. (1838) to *Tartarus*—W. P. Lapidge (1837) to *Cyclops*.

Commanders—W. W. Chambers to *Albion*—T. H. Mason (1841) and J. E. Bingham (1841) to Royal Naval College—J. Wolfe (1843) to *Tartarus*—R. H. B. Rowley (1842) to *Satellite*.

Lieutenants—J. F. Browne (1828), to be agent in charge of the Mails in Tweed for the West India Islands—G. A. Ellerman (1841), A. C. May (1838), E. Slade (1841), D B. Dawes (1841) to *Larne*—G. L. Norcock (1841) to *Caledonia*—T. Anson (1843) to *Queen*—H. Tause (1824) to *Albion*—B. G. Rowles (1843) to *Winchester*—G. Morritt (1837), W. H. Mowbray (1843) to *Vestal*—C. F. Shomberg (1838), R. B. Beechey (1828) to *Tartarus*—R. T. J. Lavinge (1839), Egerton (1841), H. T. Ryves (1841), to *Satellite*—G. Gore (1837), S. Stirling (1843), R. Coote (1843), R. Jenner (1840) to *Cyclops*—C. G. Philips (1838) to *Helena*—J. Compton (1838) to *Frolic*—E. Nicolls (1843) to *Dwarf*—H. Loring (1835) to *Camperdown*—C. E. Rowley to *St. Vincent*, as flag to Admiral Sir C. Rowley, Bart.—T. Belgrave (1843) to *Excellent*—R D. White (1840) to *Sealark*.

Masters—E. Williams to *Cyclops*—J. Haynes to *Vestal*—F. Hale to *Larne*—M. S. S. Burney to *Satellite*.

Mates—H. H. Everest to *Devastation*—P. W. Gibson to *Helena*—J. F. C. Hamilton, G. T. Graham to *St Vincent*—R. Shedden to *Winchester*—A. Fletcher to *Dwarf*—Z. B. Beale, H. T. N. Chessyre, to *Larne*—L. C. Tonge to *Caledonia*—C. Pechell, E. Hempstead to *Excellent*.

Surgeons—J. Browne, MD., to *Vestal* R. T. Easton to *Sealark*—A. B. Curror to *Larne*—J. Bankier, MD., to *Cyclops*—W. H. Foster, MD., to *Satellite*.

Second-Masters—A. R. Elliott, J. S. Hill, C. Greig to *Seaflower*—E. Rowe to *Nereus*.

Assistant-Surgeons—D. Coulter to *Larne*—W. H. Bent to *Albion*—A. Wilson, H. O'Hagan to *Winchester*—T. K. Beatly to *Nereus*—H. Sonth, J. Campbell to *Cyclops*—A. Slight to *Scylla*—E. Heath to *Dwarf*—M. J. Gordon to *Satellite*—J. Niven to *Ocean*—J. Ward to *Vestal*.

Masters' Assistants—M. T. Wright to *Vestal*—J. M'Clue, T. Kerr to *Nereus*—W. E. Gillard to *Albion*—S. Wayth to *Sealark*—J. W. Young to *Satellite*.

Midshipmen—F. H. Lambert, Lord J. Hay to *Vestal*—P. Christy to *Helena*—A. Butler to *Excellent*.

Volunteers 1st Class—R. Beaumont, D. S. Robertson to *Helena*—W. Hewitt to *Queen*—W. Scovell to *Satellite*—H. Raby to *Winchester*—H. Saunders, W. Alexander, H. Somerset to *Vestal*—A. Sutton to *Albion*—M. Smallpage, W. R. Gibbins to *Larne*—S. G. Rathbone to *Iris*—J. Campbell to *Fox*.

Pursers—J. Gregory to *Vestal*—F. Mundy to *Larne*—G Davis to *Albion*—W. Hopkins to *Satellite*—H. South to *Cyclops*.

Chaplains—E. Phelps to *Albion*—G. Jackson to *Fox*—A. Fielding to *Ocean*.

Naval Instructors—J. Gowan to *Vestal*—G. Dittman to *Albion*—C. Osbourne to *Carysfort*—A. Salkeld to *Iris*.

Clerks—J. Hunter to *Iris*—Hall to *Albion*—Shanks to *Nereus*—H. Downes to *Cyclops*—C. W. Motherwell to *Satellite*—H. Hellyer to *Larne*—J. Strain to *Victory*—J. Donald to *Imaum*—W. L. Inch has been placed in charge of victualling stores at Ascension.

Coast Guard.

Appointments—Com. G. L. Wolley to Inspecting Commander — Lieutenants Warren, Goslin, Bedford, Blyth, Rainer.

Removals—Lieut. Butler to Sutton—Lieut. Higginson to Rochester—Lieut. Leysdown—Lieut. Gahan to Gillingham—Lieut. F. Hire to Westbrook—Lieut. Davis to Whitehorse—Lieut. Wilson to Crookhaven.

Movements of Her Majesty's Ships in Commision.

AT HOME.

Albion, 90, Capt. Lockyer Plymouth.

Algerine, 10, Lieut. T. H. Mason, Nov. 25th, arr. at Woolwich from East Indies.

APOLLO, tr. s. Com. Maclean, Plymouth.

CALEDONIA, 120, Capt. A. Milne, Ireland.

CAMELION, 10, Lieut. G. M. Hunter, Nov. 25th arr, at Portsmouth from St. Helena.

FOX, 42, Capt. Sir H. Blackwood, at Spithead.

HELENA, sloop, Com. Sir C. Ricketts, at Portsmouth.

IRIS, 28, Capt. Munday, Plymouth.

JUPITER, tr. s. Com. G. B. Hoffmeister, Portsmouth.

LARNE, 20, Com. I. W. Brisbane, 25 Nov. Sheerness.

MAGICIENNE, 24, Capt. Warren, Nov. 27th, paid off at Portsmouth.

NAUTILUS, 10, Lieut. S. Thomas, Nov. 25th Portsmouth.

RHADAMANTHUS, st. v. Master-Com. Laen, sailed from Plymouth for Cork, 30th.

SATELLITE, Com. Gambier, Dec 7th, paid off.

SEALARK, 10, Commander Gouch, 25 Nov. Portsmouth.

TARTARUS, st. v. Capt. Austin, C.B. Ireland.

VESTAL, 26, Capt. C. Talbot, Dec. 7th, Sheerness.

AT PORTSMOUTH—St. Vincent, Victory, Excellent, Victoria & Albert, Penelope, Satellite, Lily, Nautilus, Fearless, Echo.

AT SPITHEAD—Helena.

AT PLYMOUTH—*In harbour*—Jupiter, San Josef, Penguin, Nereus, Confiance.

ABROAD.

AGINCOURT, 72, at Hong Kong, May 30.

ARROW, 10, at St. Helena, Sept. 1.

BASILISK, 6, at Valparaiso, July.

BELVIDERA, 38, at Barcelona, Nov. 26.

BITTERN, at St. Helena, Oct. 9.

CAMBRIAN, 36, at Amoy, May 30.

CARYSFORT, 26, at Sandwich Islands, July.

CASTOR, 36, at Rio, Sept. 23.

CHAMPION, 16, sailed from Valparaiso for Sandwich Islands, Sept 12.

CHILDERS, 16, ordered home to pay off.

CONWAY, 26, at Rio, Sept. 26.

CORNWALLIS, 72, Hong Kong, May30.

CURACOA, 24, at Rio. Sept. 17.

CURLEW, 10, South America.

DEVASTATION, st. v., at Constantinople, Nov. 26.

DUBLIN, 50, Sandwich Islands, July 26.

FORMIDABLE, sailed from Gibraltar for Malta.

GEYSER, st. v. at Malta, Oct. 13.

HARLEQUIN, 16, at Singapore, July 19.

HAZARD, 18, at Sandwich Islands, July.

HECLA, st. v., at Malta, Oct. 15.

HORNET, 6, West Indies.

HYDRA, st. v., Tagus, Oct. 24.

INCONSTANT, 50, Halifax, Oct. 5.

INDUS, 84, at Athens, Nov. 26.

LILY, 16, South America.

LOCUST, st. v , at Gibraltar, Oct. 18.

MALABAR, 74, at Gibraltar, Oct. 18.

MEDEA, st. v. at Macri, Nov. 26.

NIMROD, 20, East Indies.

ORESTES, 18, Basika Bay, Nov. 26.

PEARL, 20, South America.

PELICAN, 16, East Indies.

PIQUE, 36, at Barbados, Oct. 26.

POLYPHEMUS, at Malta, Oct. 15.

QUEEN, 110, at Malta, Oct. 15.

SALAMANDER, st. v. at Callao, July.

SAPPHO, 16, Algoa Bay, Aug. 23.

SAVAGE, 13, at Barcelona, Nov. 26.

SCOUT, 16, at Barcelona, Nov. 26.

SCYLLA, 16, at Havana, Oct. 11.

SNAKE, 16, Oct. sailed from Malta for Athens, Oct. 22.

SPY, 3, Coast of Africa.

On the 9th Aug. after a chase of 12 hours, captured a slaver with 539 slaves on board, being the finest prize taken on the Coast of Africa for some years. She proved to be the Furia, a splendid brig of upwards of 200 tons, and was under Brazilian colours. This is the fourth prize taken by the Spy within eight months. She was sent into port in charge of the Second Master, Mr. D. J. Louttid; three of the slaves died during the passage.

THALIA, 36, at Amoy, May 30.

TYNE, 28, at Beyrout, Nov. 26.

VERNON, 50, at Malta, Oct. 25.

VESUVIUS, st. v. at Athens, Nov. 26.

VINDICTIVE, 50, at Otaheite, July.

VIRAGO, st. v. at Athens, Oct. 15.

WANDERER, 16, East Indies.

WARSPITE, 50, at Tagus, Oct 24.

WINCHESTER, 50, at Simon's Bay, Aug. 23.

WOLVERINE, 16, at Amoy, May 30.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

At Aston Hall, on Dec. 10, the wife of Capt. Cole, R.N., of a daughter.

Marriages.

At Kingston, Dec. 16, Mr. W. Foster, to Ann, daughter of Lieut. J. Scott, R.N.

At Portsmouth, Dec. 9, Mr. H. Robinson to the daughter of Mr. Sutton, RN.

Deaths.

At Cobham, Surrey, Nov. 24, Admiral Sir G. Moore, at an advanced age.

At Haslar Hospital, Dec. 11, Lieut. A. S. Wight, R.N, aged 37 years.

At Anglesey Villa, Grace, relict of the late Admiral Lobb, aged 86 years.

At Haslar Hospital, Dec. 14, Com. G. Allan, RN.

At Stoke Road, near Gosport, Dec. 19, Capt. W. Toby, RN., aged 52 years.

At Exmouth, Dec. 3, Mr. Perriman, master R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of November to the 20th December, 1843.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Tu.	29·62	29·60	50	53	42	55	SW	SW	4	6	o	qo
22	W.	29·51	29·64	54	52	52	55	SW	W	5	5	pdcp (2)	o
23	Th.	29·40	29·34	52	47	46	53	SW	SW	4	8	qor (1)	qo
24	F.	29·55	29·52	35	42	33	43	SE	E	1	3	or)2)	or (4)
25	S.	29·66	29·55	37	43	35	50	SE	SE	2	2	or (1) (2)	or (3)(4)
26	Su.	29·72	29·72	52	53	50	54	SW	SW	4	6	o	qo
27	M.	29·67	29·70	53	55	51	56	S	S	4	5	o	qbc
28	Tu.	30·10	30·18	49	51	47	52	NW	W	2	2	bc	bc
29	W.	33·28	30·32	43	47	42	48	NW	NW	3	5	bm	bcm
30	Th.	33·36	30·26	37	44	34	45	SW	SW	3	3	bc	or (4
1	F.	30·05	30·03	46	45	44	48	N	N	4	4	o	o
2	S.	30·16	30·18	38	42	37	43	W	W	2	2	bcm	bcd(4)
3	Su.	30·35	30·37	45	48	38	49	NW	NW	1	1	ofg	og
4	M.	30·37	30·34	45	47	45	48	SW	SW	2	2	of	ofd 4)
5	Tu.	30·18	30·10	48	52	46	53	SW	SW	4	4	o	or 3)
6	W.	30·31	30·36	41	47	40	48	W	W	3	3	b	b
7	Th.	30·30	30·12	45	53	40	54	SW	SW	4	4	od 2)	od (3
8	F.	30·18	30·20	48	52	47	53	W	W	2	2	b	o
9	S.	30·26	30·28	36	42	35	43	SW	SW	1	1	o	o
10	Su.	30·25	30·25	43	45	42	46	SW	SW	1	1	or (2	o
11	M.	30.30	30·28	38	44	37	47	S	S	1	1	bc	b
12	Tu.	30·38	30·42	33	36	32	37	SE	E	1	1	of	ofg
13	W.	30·40	30·40	30	38	27	42	S	S	1	1	of	o
14	Th.	30·50	30·48	38	45	37	47	SW	SW	3	3	b	bc
15	F.	30·37	30·36	45	50	42	52	W	W	5	4	bc	bc
16	S.	30·34	30·36	44	52	43	53	W	NW	2	3	b	od (4
17	Su.	30·43	30·46	44	48	43	51	W	SW	2	1	b	b
18	M.	30·45	30·43	42	43	38	44	S	S	1	1	ofg	ofg
19	Tu.	30·45	30·44	43	44	42	45	SE	S	1	1	o	o
20	W.	30·43	30·37	43	43	42	44	S	S	1	2	og	og

November.—Mean height of the Barometer=29.817 inches; Mean temperature = 43.7 degrees; depth of rain fallen 2·13 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Mr. Davy's sketches in our next.

Also Lieut. Church's notice on Santa Cruz.

Errata.—page 47, lines 18 and 19, after the words "theodolite," and "error" substitute full periods for the commas,

page 48, line 5, for the *read* the.

line 6, for Tifino *read* Tofino,

Hunt, Printer, Carlisle Street, Maida Hill.

Passages of the ship Bencoolen of Liverpool, through the Strait of Rhio, in 1841-2.—*By her late Commander.*

Approaching the south-eastern entrance of the Strait of Rhio, the soundings found to the eastward of the numerous islands skirting the Lingin shore, are generally 14 or 15 fathoms, tenacious ground, at a distance of three miles; and with the north-east end of White Rock island, bearing N. 7° W., two miles, the water suddenly shoals from these depths to $7\frac{1}{4}$ fathoms.

Persons the most unpractised in the navigation of the Indian Seas can have little difficulty in pursuing their route from Banca Strait to Rhio in consequence of the leading marks being so well defined. Leaving Manopin hill in Banca, the navigator makes in quick succession the islands of Pulo Toosoo and Pulo Taya, the latter pyramidal, and may be seen forty miles; the soundings at a distance of three miles from its eastern side, are 10 fathoms, and no outlying dangers whatever could be detected by the most vigilant look out from aloft; should calms, unfavourable winds or currents prevail, anchorage is to be obtained far from the land in 15 fathoms, and when at liberty to pursue his route he recognises the Asses' Ears in Lingin, resembling the Ky-poong of Canton river, also the island of Peaked Domino, and lastly the White Rock, the concluding link of this most useful chain of beacons.

When entering the Strait of Rhio from the southward on the 7th of April, 1841, we found the channel between Alligator Island, and the Topies to be excellent and free from danger. We took this passage in consequence of the wind having headed us off, when pushing for the usual entrance, which is to the westward of the Topies; in beating through we neared either shore to a distance of three-quarters of a mile, and never found less water than 6 fathoms.

Having passed Alligator Island, keep it on the bearing of S. 30° E., this will take a ship clear of the shoals about Tree Island, and which seemed from aloft to be very extensive: the Topies may be approached on the eastern side as close as half a mile; however, to the southward and south-westward, the water appeared from the top-sail-yard to be discoloured to some extent in a triangular form, the base resting on the group of islets. When passing Strumbo point and Pulo Sootoo, or Round island (which is easily known by its lying athwart the strait, and being covered with cocoa-nut trees), the town of Rhio opened out. A corvette and schooner under Dutch colours were anchored off. At the same time a government boat boarded us to receive the report of the ship as at Anjer. Rhio seems to be a collection of large rude sheds built of bamboo, or some similar material; and upon an elevated plateau. Above the town, a pretty looking fort and other buildings may be discerned, their white walls and red roofs forming a pleasing contrast to the deep green of the trees, by which they are surrounded.

Most of the little woody islets dotting this strait seem to be inhabited, fires being seen on them during the night, and great numbers of fishing prahus find employment in their neighbourhood; fish appear to be very plentiful from the circumstance of several large fishing stages and collections of stakes being placed in various directions. When home-

ward bound we were at night very near coming in contact with mose placed in $4\frac{1}{2}$ fathoms.

At 5h. 30m. P.M., brought up in $10\frac{1}{2}$ fathoms at the distance of three-quarters of a mile from a patch of sand above water, and bearing N. $7\frac{1}{2}°$ W. from the ship; proceeded to examine it,—it is the isolated sand bank of Horsburgh's chart, lying N. $7\frac{1}{2}°$ W. from Strumbo point; it is circular, the part above water being about 100 yards in diameter, and is surrounded by a reef of stones, the outer verge of which is a cable's length from the sand, and has 6 fathoms on it; at two-thirds of a cable further in are $3\frac{1}{4}$ fathoms, and at a boat's length nearer the sand 2 fathoms; these soundings were taken at half-ebb.

Daylight, April 8th, wayed with a light breeze from north-east; at 6h. 30m. A.M. wind shifted to north-west in a heavy squall with rain; worked the ship, drawing 19 feet, five miles to windward among the shoals; at 8h. A.M. weather very hazy and lee tide making, brought up in 7 fathoms, with a part above water of the Great Reef bearing S., and Bintang Hill N. $3\frac{1}{2}°$ E.; at 1 P.M. left the ship steering on the bearing of Bintang hill, and at a distance of one mile and three-quarters from her upon that line, at the same time having the north-east end of Great Luban open with a point on the Bintang shore, found $3\frac{1}{4}$ fathoms, the depth having gradually decreased from the ship to these soundings; altered course to the north-west, steering for the east end of Pulo Tercoli, and upon a supposed parallel to the Minerva shoal; the soundings by this route were regular $3\frac{1}{4}$ fathoms, but a few boat's lengths to the south-west the water soon deepened. Referring to the chart it would appear that we must have anchored close to the Minerva rock, but did not meet with it, although in returning to the ship, steered to the south-east in a direct line from Pulo Tercoli, and kept the lead incessantly going. We landed on Pulo Tercoli; it is merely a sandy cay covered with cocoa-nut trees, which grow in regular alleys; it has a population of a dozen Malays old and young; they seemed to be wretchedly poor, and lived in a miserable hut, a very few fowls and a dog apparently constituting all their riches. One man was disfigured by a large goitre, and which he seemed very anxious to have removed.

At 4h. 30m. P.M. proceeded to examine the Great Reef. We took our bearings from a dry spot distant from the N.N.W. extremity (upon which there is a perch,) about half a mile; from that position Bintang hill (the greater) bore N. 30° 56′ E., the west end of the island of Little Luban, N. 50° 33′ W., and the eastern end of Pulo Sootoo, S. 33° 45′ E. There seems to be a great rise and fall of tide in Rhio Strait; at apparently half-ebb there were 2 fathoms round the perch, and at low water the *whole* of the reef was dry as far as the beacon, and to a great extent to the southward; at a distance of 300 yards to the north-west and N.N.W. of the perch the depth was $5\frac{1}{2}$ fathoms, and about three cables' length outside $8\frac{1}{2}$, the soundings thence to the N.N.E. and north-east were very irregular, 9, $6\frac{1}{2}$, 10, and 8 fathoms indiscriminately; the reef is composed of rock, sand, broken shells and coral.

April 9th, wayed at daylight, winds light and variable, at 9 A.M. heavy squalls from the northward attended by a strong southerly tide, rendering it impossible to proceed. Brought up in 17 fathoms sand and

mud, close to an island on the Battam shore, lying S. 6° W. from Little Luban; found it to be steep to, there being 10 and 7 fathoms close to the shore; it is covered by a dense forest of tall straight trees; we cut two for top-masts, but found upon launching them they immediately sank.

April 10th, wayed at 5 A.M. with a light breeze from the westward; 10h. 39m. A.M. calm, and a four knot tide running to the southward brought up in 18 fathoms, the north-west point of Bintang bearing S. 7° E. about one mile and a half distant. Noon landed on the north-west point with a view of cutting spars; however, found none that would suit, the timber being all too heavy; we penetrated to a distance of about two miles into the woods and found the trees to be of a most enormous size, and resembling the Eucalyptus; they were perfectly free from underwood and grass in a black fat soil, the superstratum of which seemed to be a debris of decayed vegetable matter. The most unbroken stillness reigned in this forest, and during our excursion we neither saw nor heard bird or animal; at 7 P.M. the tide turned, running to the northward.

Sunday, April 11th, at 5 A.M. wayed with light and variable winds, a strong tide running to the northward, noon calm, the ship being in Singapore strait and drifting rapidly to the westward; 1 P.M. a light breeze from east and steady; at 5h. 30m. brought up in $5\frac{1}{2}$ fathoms with the small bower in Singapore road.

The channel between the north-west end of Bintang and the Pan shoal is beyond all doubt far preferable to that on the west side next Battam island; at low water the Pan appears like a long low ridge of black stones, and several dangerous rocks show themselves in the sound between it and the Battam shore.

When proceeding through the strait of Rhio bound to Singapore, and so far advanced as to be between the Pan shoal and the north-west end of Bintang, if the northerly tide which has been assisting the ship in her progress should begin to weaken, and the breeze also be light, it is desirable to haul in at once close to Bintang to secure anchorage until the turn of tide, as that flowing from the lower part of the China sea past Romania point into Singapore strait, and thence through to the westward, diverges when abreast of the north-west end of Bintang, a part sweeping with great velocity to the southward into Rhio strait, and giving but little warning. Under these circumstances should a vessel be not sufficiently to the northward to profit by the westerly tide, she will, if not close to Bintang, run the risk of either being swept upon the Pan shoal, or several miles down the straitof Rhio before she can find eligible anchorage.

Approaching the anchorage at Singapore from the eastward, and when about two miles to the southward of Johore shoal and steering west, most of the islands scattered about the western extremity of the strait may be seen; one is very remarkable, being covered with tall naked trees, which may be readily mistaken for the masts of shipping at anchor. The red cliffs on Singapore island are also conspicuous; proceeding a little further a flagstaff may be discerned upon a bluff islet inside, or to the northward of St. John island, and upon another staff erected on the summit of a green mound above the town

(Government hill) is hoisted the signal of "What ship is that?" And which query should be promptly attended to. When the body of the town bears north-west, three or four miles distant, run boldly in, the patch close to Sandy point will thus be left far on the starboard hand.

When leaving Singapore proceeding to the eastward to the strait of Rhio, care must be taken not to mistake the northern end of Battam for the north-west point of Bintang which is ten or eleven miles further to the eastward; each point has a small island lying off, and is very similar; it is also remarkable that the coast of Battam trends away to the S.S.W., forming apparently the entrance to a strait, but which in reality is a deep and dangerous bay, studded with reefs lying far from the land. During daylight, and in clear weather, the bearings of Johore and Barbueit hills will indicate the position of the ship; but this part of the Malay peninsula being often overhung by mists collected by the summits of these hills, leaving merely a low jungly coast as an uncertain guide, causes a great probability of such an error being committed, particularly when the rapidity and uncertainty of the tides are taken into consideration.

Adverting to this notice of a passage to the northward through the strait of Rhio in the latter part of the north-east monsoon, it will be seen that the time occupied in effecting it was nearly five days, the winds very faint, and principally from N.E. to N.W., and the entire number of hours the ship was underway only 37½, and the tides always flowing to the southward, except for about four or five hours in the early morning. Again, in February 1842, we left Singapore at 6 A.M., entered the strait of Rhio 1 P.M., and passed the Topies at 8 P.M. the same day, thus doing in fourteen hours the work of five days, and were only seven hours in the strait of Rhio. Upon the same occasion we were only eight days and six hours from the time of leaving Singapore in arriving at lat. 7° S., and long. 104° 44′ E., in the Indian Ocean, and thirty-seven miles outside Java Head.

A few Local Remarks useful to Masters of Merchant Vessels.

When a ship arrives at Singapore she is not paid revenue or sanatory visits, there being neither custom-dues, nor port charges; the post-office however, sends a boat for the letters, all of which must be delivered, under a penalty of 1000 rupees; the man in charge registers an entry of all particulars respecting the vessel, destination, &c.

Numbers of boats come off filled with persons tendering their services as debashes, serangs, sampan, and bum-boat men; the debashes are either Chinese or natives of the coast of Coromandel, it is their province to supply ships with fresh provisions and vegetables. The usual allowance to the crews is beef, pork, turtle, and fish alternately; it is conducive to health (preventing dysentery) to give once or twice a week the regular supply of salt provisions instead of fresh. We paid the following prices:— beef and pork 10 cents per lb., fowls and ducks 3½ dollars per dozen, large turtle 1½ dollar each, fish 5 cents per lb., yams 1½ dollar per picul, (133⅓ lbs.), pumpkins 1 dollar per dozen, rice 2 dollars 35 cents per

picul; ship bread, beer, and other stores are so very fluctuating that we can hardly quote them.

The sanpan boys or boatmen are either Malays or Klings. The daily hire of the sanpan and three men is 1½ rupee; they attend from daylight to any hour of the night they may be required. It is usual for each vessel to lend her sanpan a flag, to distinguish it from that of a another; ships at Singapore seldom use their own boats.

The bum-boat people are generally Madras men, one boat only of this class should be allowed to attend; the owner opens an account with the crew, giving each man credit to the amount fixed upon by the master of the ship, and it should be understood by him that he is not to exceed that, except at his own risk; nor is he to bring spirits alongside on any account.

The serangs discharge and load ships, finding the coolies or labourers. Their terms are 1½ rupee per day for themselves, and 1 rupee for each cooley, they are also fed at the charge of the vessel at the rate of about 20lbs. of rice and fish to sixteen men.

Masters of merchant ships should direct their mates to be very careful in giving correct boat notes, with the goods they may be landing in the cargo lighters, on account of the dishonesty of the boatmen, (generally natives of India,) who understanding *written* English perfectly, can easily see if the contents of the boat agree with the note when unloading at the wharf; if a surplus package should by mistake have been placed in the craft, it is lost to the owners, without a chance of recovery.

Spars are cheap at Singapore; we put a new bowsprit of pine into a ship of 402 tons register for 52 dollars, and purchased a rough spar of the same wood, 56 feet by 18 inches through for 10 dollars. There is a description of hard wood called Meribou very useful, and is suited for ornamental work, being susceptible of a high polish. There are three or four establishments where carpenters' and blacksmiths' work may be executed, the latter at the price of 18 cents per catty (1⅓ lb.); caulking is at the rate of 35 cents per man per day. There is no dockyard for repairing ships. A vessel may, however, be safely hove down in the entrance of Kelang river for either repairs or coppering, and which can be satisfactorily done by the English master shipwrights.

Filtered water is brought off in floating tanks, pumped on board and delivered at the rate of 1 dollar per ton.

JOHN B. CALDBECK,
Passed Master R.N., (late Commander of Bencoolen.)

[Some remarks by the Commander of the Bencoolen through the Strait of Rhio, with cautions to the navigator, are introduced into the Admiralty chart. —ED.]

Voyage of H.M.S. Thunderer,* to the Mauritius and Back.

Notes by Mr. H. Davy, Master R.N.—1823.

The following Table exhibits the performance of a fast-sailing ship of the line, and as the tracks are more direct than is usual with sailing vessels, it may serve hereafter to compare with the quick steam passages which we may expect to have recorded in the pages of the *Nautical*.

Ports and Points in the route.	Dist. in Miles.	Dist. run in Miles.	No. of dys.	Averg run Daily.	Averg run hly	Month.	Draught of water Arrival	Draught of water Sailing.	Remarks, See below
							ft. in	ft. in	
Plymouth to Cork	230	250	3	83	3,4	Feb.		23 4	
								f 21 8	
Cork to Porto Praya, C. Verd	2337	2464	20	123,2	5,1	March	*a* 23 1	*a* 24 1	1
							f 21 7	*f* 22 3	
Porto Praya to Equator 21°W	906	918	7	131	5,5		*a* 23 1	*a* 23 6	2
							f 21 6	*f* 21 9	
Equator to Cape Good Hope	3023	4448	32	139	5,8	April			3
C. Good Hope to Mauritius	2290	2919	21	139	5,8	May	*a* 22 6	*a* 23 9	4
							f 20 6	*f* 22 1	
Mauritius to abreast of C.G.H.	2290	2427	21	115,6	4,8	June	*a* 22 7	*a* 23 9	5
							f 20 4	*f* 21 10	
C. Good Hope to St. Helena	1712	1798	16	112,4	4,7	July			
St. Helena to Ascension	699	708	6	118	4,9	Aug.	*a* 23 0	*a* 23 6	6
							f 21 0	*f* 21 10	
Ascension to Equator, 18° W.	522	529	4	132	5,5		*a* 22 10	*a* 23 1	7
							f 20 10	*f* 21 2	
Equator to Sal, C. Verds	1042	1057	7	151	6,3				8
Sal to St. Michaels	1435	1470	16	92	4,0	Sept			
St. Michaels to Plymouth	1195	1689	21	81	3,4		*a* 22 6		
							f 21 1	Plymh	
Total	17681	20677	174	119	5,0				

1—Crossed the Northern Tropic in 21° W.—Got north-east trade, 22° 52′ N., 20° 40′ W. 2—Lost north-east trade, got south-east trade, 2° 38′ N., 21° W. 3—Crossed the equator in 21° 30′ W. 4—Lost south-east trade, 21° 15′ S., 26° 43′ W.—Crossed the Southern Tropic, 23° W. —Crossed the Indian Tropic and got the south-east trade, 58° 30′ E. 5—Re-crossed ditto, lost south-east trade, 52° 12′ E. 6—Got Atlantic south-east trade, 24° S., 2° E.—Crossed the Tropic 1° 30′ E. 7—Crossed the equator in 18° W. 8.—Lost south-east trade 3° N., 19° W. —Got north-east trade, 17° N., 22° W., lost ditto, 28° N., 29° W.

About the middle of February, the Thunderer was ordered to prepare for the reception of troops. This in ships of her class consists in getting the lower deck guns out, discharging 100 seamen and 100 marines, covering in the skids and building up cabins, and placing mess tables on the lower deck abreast the ports, and on the main deck between the guns. Sufficient cabin room was provided for the officers, and sixty mess tables for the ship's company and troops, leaving the starboard side of the main deck for carrying on the work of the ship.

February 20th.—Sailed from Plymouth, the wind was southerly inclining to the westward; made Scilly light in the middle watch, and having weathered the islands by noon of that day, bore away north, anchored in Cork harbour at sun-set of the 23rd.

The first battalion of the 45th regiment embarked on the 25th; a

* Of 84 guns, Captain D. Pring.

south-east gale, which detained us, was succeeded by a fair wind out of the harbour, and on the 28th, a most beautiful day, we sailed for our long voyage, steering south-west under all sail.

The 45th regiment including women and children were 610 in number; 7th dragoon guards, 1 officer, 1 man; royal artillery, 1 officer, 3 men; passengers 2; ship's company 534—total on board 1152.

As the consumption of water was of the greatest importance, I record the water list; the quantity there specified was never at any time exceeded, and in consequence the lower tier of tanks remained untouched, most material to the stability of the ship, and a grand reservoir in unlooked for delays. With the exception of a few hours south-westerly wind, we were favoured with fine breezes between north-east and north-west, continued steering south-west, which is a fair course to the westward of Madeira, and towards the Cape Verd Islands, allowing for the south-easterly current which is usually met with at various points in this route.

Water List February 28th, 1843—Cork to Cape of Good Hope; number of Persons on board, 1152. Quantity of Water stowed, 360 Tons.

Captain's Mess.			Ward-room Mess.			Gun-room Mess.			Warrant Officers.			Purser's Steward & Servt	Master at Arms Mess, 3 in Number.		Sick and Sick Mess.		Army Sick.	For Waste.	Ship's Company and Troops—1049, 7 pints each.	Total.
21 in No.	Washing for 13, 1½ pint each, and stock.		33 in No.	Washing of 27, 1½ pint each, and stock.		37 in Number.	1½ pint for 30, and stock.		7 in Number.	1½ pint for 4.										
G.	G.	P.	G.	G.	P.	G.	G.	P.	G.	P.		G.	G.	P.	G.	G.	G.	G.	G.	
22	7	2	33	33	0	37	10	0	7	6		2	1	4	28	10	32	918	1120 Galls, 5 Tons.	

Water for 72 days.

March 9th.—In lat. 36° 20′ N., long. 16° W., just after sunset we first observed the late brilliant comet; the tail was then only 10° above the horizon; on the 17th in 20° N., 21° 30′ W., it was 43° 16′ above the horizon, and the upper edge of the tail 4° 36′ from Rigel; the tail extending 37°, crossing the constellation Eridanus. At this time it was most distinctly seen, and exhibited a wonderful and splendid sight. The comet was visible until April the 7th, in 19° S., 27° W.; but very faint and difficult to trace. The tail had moved inside Rigel.

We passed Madeira during the night time, at thirty-five miles distance, and carried our fine north-east wind to 26° N., 21° W.; fresh breezes from south-west and west now set in, and in two days carried us to the tropic and the north-east trade. As we were going the eastern side of the Cape Verds to Porto Praya, the course was south-westerly until at 8 o'clock P.M. of the 18th, when the Island of Sal, then by reckoning and stars, bearing S. 30° W., distant eighty-seven miles, Bonavista S. 15°, W. 124, and no current experienced during the preceding twenty-four hours, a course S.S.W. ½ W. was steered, and at

daylight next morning Sal was seen W.b.N. eleven leagues, the Peak of Martinez and another hill to the southward making like two round islets. It was when abreast of these that Bonavista was descried being forty miles distant, and appearing also like small islets. We gave Bonavista a berth of twelve miles, and by sunset, when abreast of Mayo shortened sail, and hauled out for the night on the port tack. At midnight the Southern Cross was first seen. On the morning of the 20th bore up for St. Jago, rounding the south point of Mayo at the distance of nine miles, steering west for Porto Praya. It should be remembered of those islands that their northern parts only are high, and that to the southward they terminate in long very low points, so difficult to be seen by night, that the utmost caution is necessary in rounding them. At 8 o'clock we anchored at Porto Praya in ten fathoms, soft sandy bottom; the peak of Fogo, which is near 10,000 feet high in sight just open to the southward of Red Hill, it bore W.b.N. $\frac{3}{4}$ N., the east point of the bay E.b.S. $\frac{1}{4}$ S., Fort flagstaff N.N.W. $\frac{1}{4}$ W., and Quail Island from N.W. $\frac{1}{4}$ W. to W.b.N. $\frac{1}{4}$ N., just one mile from the watering-place, and three-quarters of a mile from the upper or proper landing-place. At this desirable anchorage, situated almost on the frontier of the hot and calmy regions, and enjoying a pleasant temperate climate, we refitted ship, completed water, and laid in a most valuable stock of refreshments, the more so, as being thus amply stored there was scarcely a chance of having to touch at any intermediate port.

From the favored position of Porto Praya during the fine months which are from the middle of November to the middle of July, it holds out much higher inducements to the eastward bound ships than either Madeira, the Canaries, or the Brazils; throughout the above period, the island is healthy, and the wind steady from north-east, with clear weather. By going to the westward of Madeira there is a great probability of having a long run with the north-easterly wind, which so frequently blows to the northward of that island, and not unfrequently merges into the trade, whereas by anchoring it may be altogether lost, an occurrence by no means improbable.

Water, poultry, eggs, fruit, and vegetables are the principal supplies of the island, and to be had in abundance; the prices are included in a table annexed to these notes. A dollar is worth four shillings, and a sovereign five dollars. Beef of an indifferent quality may be had for the ship's company at 3*d.* to 4*d.* per lb., and vegetables, consisting of yams, pumpkins, tomatoes, and onions for $1\frac{1}{2}d.$

The water is good, and can be obtained at all times of the year, it is conveyed from the mountain through pipes which extend three miles, and is turned off in the town; the small tank on the shore contains 11,000 gallons. Men-of-war or merchant vessels pay the same, viz., four shillings a butt, if from the town, or, from the beach two shillings; the consul makes the necessary arrangements. The casks must be rafted, and the ship has to send her boats to tow them off, the native people do all the rest, fill, roll down, &c. It is necessary to send a cooper as the people on shore are very careless in bunging the casks, and very recently it happened to a vessel, that after filling up they found that the water was brackish. We got 200 butts with great ease, and all of excellent quality. It appears that numerous springs of fine water, which now

flow down the vallies and become lost in the sands, could at a small expense be made available for the supply of a large fleet.

This was the third time that the 45th regiment, going on foreign service, had touched at St. Jago, and on one occasion, when a French squadron appeared off the port, they were landed, threw up defences, and prepared to give the enemy a warm reception. They were detained at Porto Praya six weeks, but fortunately for them it was during the healthy, season, and they got away without sickness. To the new soldiers of the regiment there was, therefore, an interest in the place, and numerous were the enquiries if their battery could still be seen.

As the ship was surrounded by boats, there was a great scramble among the soldiers and blue jackets to get a share of the good things; money was short; but red jackets, blue frocks, regimental caps, and lastly, Father Mathews' temperance medals, all went in exchange for the bags of oranges which were hauled up the ship's side. Massa Sambo in a 45th jacket and cap, with a badge suspended from the waist, was very grand, and made a most ridiculous caricature.

The British consul, Mr. Renells, resides entirely at Bonavista, which is considered to be the healthiest island of the group, and his duties at Porto Praya are conducted by a native coloured man.

The Americans make St. Jago their head quarters, and our vessels from the coast also call there occasionally. The *Madagascar* was at Bonavista at this time. Indeed there can be no doubt, but that during the healthy months it must afford a valuable recruiting station for the African squadron. August, September, and October, being the rainy and sickly quarter of the year, the place of course is to be avoided, the more so, as the winds prevail from south-west and south, but particularly the south-eastern are dreaded, blowing as they do right in, accompanied by a heavy breaking sea; the anchorage is very dangerous throughout this period.

Of the American navy, the Porpoise brig, in the Navy Register, of ten guns, but mounting fourteen, twelve 24-pounder carronades and two long nines, was at anchor, having just arrived from the United States as a part of the squadron in fulfilment of the Ashburton treaty. She was commanded by a Lieut. Arthur Lewis, an old officer of seventeen years standing, having under him three lieutenants, with a crew of 120 men. This vessel, I believe, is similar to the Somers, of mutiny notoriety, and measures 270 tons American. The Bainbridge and Buxton are of the same class. The following are the principal dimensions:—

Length of keel for tonnage				85 ft.	3 in.
Breadth of beam for ditto				25	0
Ditto do. extreme				25	7
Depth of hold				11	0
From taffrail to knight-heads				105	0
Main-mast, length 60 ft. 0 in.			Diameter	21	0
Main-top-mast	36	0			
Do. gallant-mast	18	3			
Do. royal	12	3			
Do. pole	4	0			
Total	130	6	from the deck.		

The masts rake very much. I understood that her guns were considered much too heavy for her: her accommodations were very bad; and on the whole, I should say, that the Porpoise was anything but a good specimen of the American navy.

Another class of small vessels recently added to their service are the 18-gun corvettes; of these there are five now in commission,—the Decatur, Preble, Yorktown, Marion, and Dale. Their armament consists of sixteen 32-pounder carronades, and two long 24. They measure about 530 tons. These small vessels do not appear to be favourites with the American officers generally, neither do their line-of-battle ships; but as I have frequently heard them remark, they feel quite at home in their fine large frigates and corvettes. Of these, perhaps, the Congress of the first, and the Saratoga of the latter, are favourable selections. The American government are now trying the rotation system, which is expected to be a very popular measure. I have not heard the route, but, I believe, that the Mediterranean, Africa, and Brazils form one part. The African service appears to be a very distasteful one, either as regards the suppression of slavery, or, the climate; and, as the majority of the officers are from slave-holding states, being more or less connected with slave owners, it is not surprising that such should be the case.

Naval Uniform.—There is one part of their recent regulations respecting dress, which is exceedingly chaste and appropriate; it is that of the captains, when in undress, without epaulettes, to wear shoulder straps of blue cloth, with gold embroidery on each edge, and the star or anchor in the centre; the straps to be two inches and a half long, and half an inch wide. Commanders and other officers to wear, as usual, gold lace straps.

As in our army and marines, colonels and majors have for many years worn a crown or star on their shoulder-knots. It does appear strange that flag-officers and captains should not also be similarly distinguished, more particularly as that description of undress is so generally worn, being more suitable to actual service and tropical climates.

Our American friends appear to be as busy as ourselves in looking ahead for the next war, and to discover some very destructive agent, whereby the enemy shall be blown to atoms, whilst themselves are to be freed of all danger, has formed some of the late deliberations of Congress. The two following acts have recently been issued:—

"Be it enacted, &c., &c., That the Secretary of the Navy be, and he is hereby authorised to enter into contract with Robert L. Stevens for the construction of a war steamer shot and shell proof, to be built principally of iron, upon the plan of the said Stevens, the sum of 250,000 dollars being appropriated for that service.

"Resolved by the Senate and House of Representatives of the United States of America, in Congress assembled, That the Secretary of the Navy be, and he is hereby, instructed to render Mr. Samuel Colt, facilities to test his submarine battery to an extent which will settle the questions whether these or any other plan can, with ease and safety, successfully be employed, as a power sufficient to destroy the largest class of ships of war when in motion passing in or out of harbour, without the necessity of approach within reach of shot from guns of the

largest calibre; and whether continued operations of the destruction of one or more vessels can be effected with renewing the means under exposure of an advancing squadron, and whether the same can be used for the defence of a harbour, without endangering the passage in or out of other than hostile vessels. That 15,000 dollars is appropriated for testing the above submarine battery."

On the 22nd March, the wind blowing strong from the north-east, we sailed for the Cape, and in the 1st watch the ship was going, in seamen's phraseology, clean off the reel, thirteen knots, not by any means bad sailing for a liner. As the most eligible meridian to cross the equator is between the 20th and 21st degree of longitude it will be necessary to steer a south course from Porto Praya until in the south-east trade; we had no calms or variables but ran from one trade wind into the other; and having cleared the squalls and rain which usually accompany this change, regained fine clear weather, so clear that Venus was distinctly visible during the forenoons, and on the 28th by her meridian altitude we were in latitude 1° 19′ N., the next evening at 9 o'clock just 1° south of the line, the following temperatures were taken :—

Upper Deck	80°	Surface water	82°
Main do.	82	Fresh water in tank	68
Lower do.	84	Main hold	78
Orlop do.	84	Coal hole	80

The farce of Old Father Neptune becoming obsolete, we dispensed with his services. Fancy the old gent. having to superintend the shaving and ducking of 1000 of his unruly children, the blues and the reds serving each other out; in merchant vessels where there are fewer persons, the ceremony may probably pass off pleasantly enough, but although I have joined in and witnessed the performance many times, I remember that circumstances generally occurred to cause regret.

The trade wind which set in S.S.E. veered as we advanced to S.E., and finally to E.S.E., in strength from No. 4 to 5, attended with a light south-easterly swell. To a crowded vessel this part of the journey, from the continuance of fine weather and from being broadside to the breeze, was undoubtedly the most pleasant; the beautiful starlight nights had also their quiet charm, and these "tapers of heaven" were a source of wonder and admiration to hundreds who had never gazed or perhaps thought of, aught beyond their own starry firmament. It may appear strange, but amongst the many on board not one had ever seen the planet Mercury. On the 8th of April, very early in the morning watch, we had a splendid sight of Mercury, Venus, Jupiter, Saturn, and Mars, Mercury being just above the horizon, and Mars culminating right over the mast-head. The splendour of Venus was dazzling in the extreme; scarcely less so was Jupiter, his satellites being visible with a common glass; the planets appeared very near and gave a light resembling the morning's dawn. These subjects with others more immediate are full of interest, and engage the attention in long voyages, more probably than at any other period of our lives, unfolding to the young traveller a new world full of beauties and the wondrous works of the Creator.

By keeping a good full only, we passed 104 miles to windward of

Martin Vas, thus demonstrating the disadvantage of touching at Rio Janeiro, we in fact saved nearly one-third the breadth of the Atlantic Ocean in distance. Having run out of the trade wind, our course to the latitude of 30° was S.b.E.; bearing in mind that to make southing is the great object to be gained, as a southerly swell with a set to the northward will be experienced the whole way across, the wind at the same time being mostly from the southward.

The winds varied in circles the very opposite to those of the North Atlantic, and the phenomena attending them, although in exact accordance, were also in opposition. The wind at south goes to south-east, east, north, and what in England would be termed backing against the sun; so also it happens that a vessel may be running with a westerly breeze and be taken aback with a south-easter. In like manner, a vessel in our Atlantic running with a south-east wind is liable to be suddenly taken aback with a north-wester, and many a goodly ship has met her doom by those instantaneous shifts. In both hemispheres those changes are preceded by lightning, and to the careful seaman it is only needful to forego the run and place the ship on the tack she must come up on.

The high land of the Cape of Good Hope distant 40 miles, was made on the 27th April, which was our 56th sea day from Cork. The next morning we had calms and light airs with a heavy breaking sea from the south-west, the result doubtless of stormy weather. The sea broke on the beach with such force, as to cover the low lands with a sort of mist; it set in very suddenly and assailed us when about twelve miles from the shore. The ship rolled deep in the hollows 20° each way, and was unmanageable. In this helpless state evidently closing with the coast, we were taught to see how small was our power; at one time we had a three knot breeze off the land, the sails were trimmed but it was of no avail. The flapping of the sails was like the report of guns, and the ship still went astern; the breeze however freshened and we got out twenty miles from the Cape, when it again fell calm. With the Cape bearing S.E. $\frac{1}{2}$ E. twenty seven miles, we had soundings in 155 fathoms coral and black sand.

By the 30th the sea had gone down and a light air sprung up from the northward, the precursor of a north-west gale. We pushed on and anchored in Simons Bay, in time to make all snug for it, and it came, with all its disagreeables, heavy squalls, a great deal of rain, &c.

False Bay, which abounds with fish, from the whale to the minnow, and is frequented by a numerous variety of South Sea birds, is sixteen miles wide and about as many deep. Simons Bay is a nook on its western shore, and for the year round, Saldanha Bay excepted, is without doubt the most secure anchorage in South Africa. The distance to Cape Town is twenty-four and half miles over an indifferent road, and the environs of Simons Town are not of that improvable nature necessary for the rise of a great commercial town. These are certainly great drawbacks, still it will ever form a most valuable naval station. Steam and other modern improvements may do much for it. It is now a place of great resort, and vessels are fain to run for its shelter, frequently by night, and in tempestuous weather. Ought not the dangers then, which are really great, and have been the cause of many disasters, to be

seriously thought of? I have worked in and out of False Bay against strong winds by night as well as day, and I am sure that the many who have travelled the same road will concur with me, as to the uncertainty and anxiety attending it. The dangers are as follows, viz:—The Bellows and Anvil off the Cape; about half way up the bay and direct in the track is the Whittle Rock; still higher up is Seal Island, and its extensive reefs, and in front of Simons Bay is the Roman Rock. Of these the most to be dreaded is the Whittle, between which and the western or Cape shore is the usual passage, the channel being four miles wide; the least water on this rock is twelve feet with four to five fathoms a cable's length round, deepening thence to fifteen and twenty.

According to Horsburgh a beacon was first placed on it in 1811. In the 32 years that have intervened, how many have been placed there? for they are frequently washed away, and at this time there is another getting ready, to be moored with chains and six large pigs of iron ballast, of course to be washed away by the first gale. This constant expense and inadequate means of pointing out the danger, may be remedied, I should advise, by establishing a light vessel, similar to the one at the Seven Stones,—a light vessel that could be seen by ships rounding the Cape either way. It would be of incalculable advantage, a guide to clear all dangers and to be seen from Simons Bay, so that signals could be made, giving information of everything taking place in the Bay; no lighthouse on the Cape would be near so useful. A beacon on the Roman rock similar to the one on the Wolf, and a light vessel on the Whittle, and the navigation of False Bay would be rendered perfect.

The facilities in getting supplies are not what they ought to be, considering the number of vessels so frequently arriving and sailing. Watering is very slow, and much delay is experienced in consequence. A tank is very necessary. The Dock-yard lacks the managing men to push the duties through, and in that respect suffers equally with all other yards out of England, Malta excepted, which is an exceedingly well conducted establishment. I have within the last few years visited every Naval yard in the Empire, from Trincomalee to Kingston, Upper Canada, and can bear testimony that they have all more or less fallen to neglect. The officers who advised the reductions were no doubt guided by proper motives, but there can be no doubt as to the effect; a master attendant, a superintendant of shipwrights, and a boatswain are indispensably necessary in each establishment; their salaries would be more than made up to the government by the care of stores, the preservation and good order of the yard, and by the saving of check money.

Stock and all other necessaries are very expensive at Simons Town, which is the more surprising, as the colony produces all the necessaries of life in abundance. We paid one shilling a pound for the Preserved Potato, in England the price I believe is very small.* The merchants are in fact over grasping, and doing the settlement a serious injury; the consequence is that Cape Town is much preferred; the distance may seem against it, yet the charges are so much more moderate

* We beg to call the attention of Messrs. Edwards' and Co. to this fact.—Ed.

and the goods of a better quality, that even after the expense of a wagon the advantages are great.

What an interesting sight it is for the new comer, just from home, to witness that ponderous machine, the famous South African wagon with its team of ten to twenty bullocks, to watch it winding along the sandy shores of the bay, and think of the railroads left behind. There is an omnibus running between Simons Bay and Cape Town, and the mail leaves three times a week; twenty-five shillings is the charge for the hire of a horse and gig.

The entensive introduction of sheep of the Merino and Saxon breed appears to have been attended with most valuable results. The wool bearing sheep throughout the colony are now very numerous, and entirely superseding the fat tails. The wool is described as of a superior quality, large shipments have already taken place, and doubtless it will become the staple of the country. The fat tailed sheep have hitherto been considered almost as a characterestic of the country, and one can scarcely think of the Cape without them. It is said however that they are only missed by the good old Dutch housewives, to whom the wonderful tail was an article held in much esteem in all cooking affairs, in making oil, and when salted and smoked, to use as a substitute for bacon.

An intelligent gentleman who has travelled the length of the colony even to Kafferland, in speaking of its extraordinary productiveness and capabilities thinks that the world would be surprised if its wealth could find easy outlets. Steam must do it. Already there are two steam coasters, and the Albany people have a steamer, called the Sir John St. Aubyn, in the Kowie river; the Knysna and Zwartkops are two important rivers and by the aid of steam would become navigable for many miles. The Knysna has an easy entrance, and is already visited by vessels of moderate burthen; its banks abound in valuable timber, and hence it is the building port of the colony. Several vessels have been built there; small iron steamers of 20 to 30 tons, have been employed in opening the navigation of the small rivers of Spain, in plying on the Nile, and on the shallow rivers of Europe generally; it may therefore be expected of a country so abounding in rivers as South Africa, that similar advantages will ere long be obtained for it.

(To be concluded in our next.)

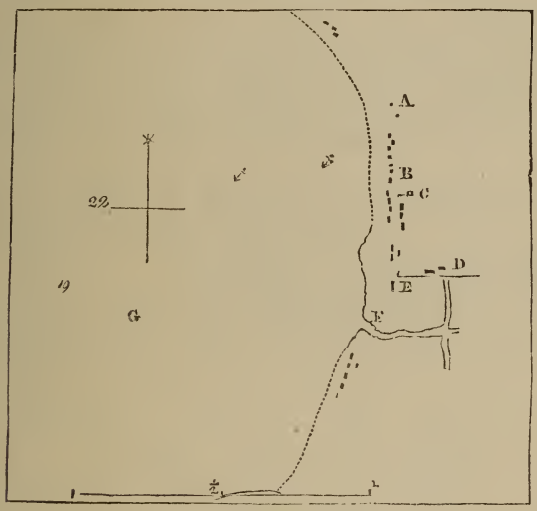
Remarks on Ampanan.—*By Commander Owen Stanley, R.N., late of H.M.S. Britomart.*

The increasing importance of Ampanan situated on the west side of the Island of Lombok, from the quantity of rice annually exported, may render the following remarks acceptable, particularly as many Merchant Ships are deterred from anchoring, by the way in which the Ampanan ridge is laid down in the old charts.

The south part of the island of Lombok is high, but in the vicinity of Ampanan is low, forming beautiful plains of considerable extent,

with every facility for irrigation from the numerous streams that descend from the hills. These plains are well cultivated, and produce rice of the best quality in great abundance.

In standing in for the anchorage, which may be known from the houses on the beach, the Ampanan ridge of the old charts will be passed; upon which the average depth is from five to eight fathoms, except in two small spots, where there is not more than three and a quarter. After passing the bank there is good anchorage at any convenient distance from the beach which is steep to. The surf which at times sets in with violence on the beach is the only drawback to the place, but as it is generally smooth in the mornings, and the surf does not extend any distance out from the beach, the inconvenience is not so great as might at first sight be expected; and would be done away with if Mr. King succeeds in building the jetty he proposed.



Sketch of Ampanan Roads.

A Single tree. B Well. C Mr. King's house. D Market-place. E Palace of Rajah. F Watering place at the mouth of the fresh water stream.
The beach is generally steep and sandy, and between the Palace and Watering place the ground is thickly wooded. The anchors are both in 8 fathoms. There are 10 and 11 between them. Between the outer anchor and 22, the depth increases gradually. To the southward the ground is very uneven, and at G there is only 3 fathoms. The Scale is one mile.

The chief export of Ampanan is rice, of which sufficient is produced to load from fifteen to twenty vessels annually. Stock of every sort may be procured here in great abundance, and very cheap; the flesh of the bullocks is said to have a slight taste of musk, in consequence of their feeding on a particular shrub, but it goes away as soon as the animals are removed to pastures where the shrub is not found. Ducks also are bred in great numbers, and form an article of export highly prized by the Chinese; they are kept in large flocks, each of which is under the superintendance of a native boy who drives them out to feed,

and keeps them together with great ease by means of a bunch of feathers tied to the end of a long bamboo. The ducks eggs are also salted in great quantities for the Chinese market.

At the period of our visit, Oct. 1841, we procured in the vegetable market, sweet potatoes, pine apples, mangoes, cucumbers, a great variety of vegetables, and a sort of fruit, resembling a gooseberry in taste, and a plum in outward appearance. The bay appeared to be full of fish. Fresh water may be procured either from a well near Mr. King's house or from the river to the southward of it marked in the sketch. We procured eight tons of water from the river with very little trouble and found it to be very good. Firewood can be procured in any quantity.

The peak of Lombok on the north-east side of the island rises to a height of nearly 9000 feet, and has been a volcano. At or near its summit there is said to be a salt water lake which the natives believe to be unfathomable.

Mr. King, an English merchant, has been a resident at Ampanan for some years, and possesses great influence with the Rajah. Mr. King acts as an agent for procuring all supplies and cargo, and has an establishment for ship-building at Labouan Treeang which he describes as being a secure landlocked harbour where timber could be easily procured.

The island of Lombok is very thickly inhabited by an industrious intelligent race of men, who do not own the authority of the Dutch Government, but are ruled by a Rajah who is assisted by numerous petty chiefs styled Goosties. Their laws are written, and are very severe, death being a common punishment.

During our stay at Ampanan Mr. King gave a large party to the rajah, and all the petty chiefs, about 2000 of whom were present, all armed with their creeses. About 11h. A.M., the rajah's mother arrived in state, preceded by a guard of men, armed with long lances, richly ornamented with gold. She was dressed in a white jacket, with a small gold ornament on her head, and was followed by the young prince who wore a gold band in his hair; next came the wives of the rajah all of whom wore rich gold diadems; a numerous retinue of female attendants closed the procession. It not being the custom in Lombok for the women to mix with the men, the Queen at once proceeded to a house Mr. King had provided for her reception, so arranged that without being seen themselves the ladies could see all that was going on.

A sort of play immediately commenced, the performers being four boys sons of Goosties dressed as females. To those who understood the language the play seemed to give great pleasure. The action of the performers consisted of a slow graceful minuet movement, in which the arms and hands performed by far the most prominent part. This play, which lasted for upwards of an hour, was succeeded by a tragedy performed by some of the Goosties, which was very animated; in the middle of this performance the Rajah himself arrived mounted on horseback, but without any saddle; he was accompanied by his second brother, and attended by an armed retinue; he seated himself on a raised platform that commanded a view of the performance, and soon after sent to beg that we would take our seats near him. He and his brother

were the finest men present, and were dressed nearly in the same way as the rest, the only difference being that instead of having the body naked to the waist, they wore a coloured handkerchief over their shoulders, and the handles of their creeses were of gold, richly inlaid with precious stones. After the tragedy was concluded some dancing girls were introduced, who performed until dinner was announced about 3 P.M., to which the Rajah and suite did ample justice.

After dinner the Rajah amused himself with two jesters, who appeared to form a regular part of his establishment. The dancing then recommenced, and continued till about six o'clock, when all the multitude went quietly home, and though they had been far from abstemious there was no quarrel or disturbance of any sort. According to Mr. King's account no accidents or quarrels ever do occur at these feasts, their laws being so severe that an offender is liable to be punished with death on the spot.

During the Rajah's stay the attention paid to him by the others was very great; on his arrival every person sat down, which is their mode of showing respect, and whenever they had occasion to pass him did so in a stooping attitude. Whenever a Goostie of high rank rose from his seat, all of lower rank who happened to be sitting near him rose also, and did not resume their seats till he was gone away.

Part of the population of the island are Mahomedans, and the rest Hindoos. The latter burn their dead, and on the death of a Rajah some of his wives are generally burnt with him.

The last Rajah was shot some years ago, and when his body was burned, seven of his wives voluntarily committed themselves to the flames. The ceremonies on the occasion, as described by Mr. King, who was present, closely resemble the suttee in India.

Sailing Directions for Harwich Harbour.—*By Captain J. Washington, R.N., of H.M.S. Blazer.*

Harwich is the only safe harbour between the Thames and the Humber. The bottom is clean (with the exception of Cliff-Foot Rock,) and the holding ground is good. Spring tides rise $11\frac{1}{2}$ feet; they never exceed two knots, and run fairly through the channels, except at the entrance where both flood and ebb set across the banks.

The approach from the eastward passes through the two outer anchorages, called the Pitching Ground and the Rolling Ground, leaving the Platters and the Andrews to the northward, and the Cork Ledge* and the Ridge to the southward. This channel is about 750 yards wide, with an average depth of 20 feet; and leads directly into the harbour between Landguard Point and the Beacon Cliff, and up to the confluence of the rivers Stour and Orwell. In the space between Landguard Point and the town of Harwich, there are seven shoals,—

* We understand that the Elder Brethren of the Trinity-house, seeing the value of this harbour, and ever watchful to forward the interests of navigation, have decided upon placing a floating light at the Cork Ledge in the course of the spring. —Ed. N.M.

the Cliff-Foot, Altar, Glutton, Bone, Cod, Gristle, and Guard; and these shoals divide the entrance into two principal channels.

The *Eastern and usual Channel*, after passing the Beach End buoy off Landguard, leads close round to the westward of the Altar buoy, then crosses the Altar Flat in 12 or 13 feet, at low water, when following the Suffolk shore, it leaves all the rest of the shoals to the westward.

Directions.—From abreast of the Andrews Buoy steer to the westward, so as to bring the High light-house its own breadth open west of the Low light-house. Run in upon that line passing to the southward of the Black Beach-end buoy, and hauling close round to the westward of the Black Altar buoy. If the latter should not watch it will have been passed when the Mortella tower (P) on Landguard east beach opens north of the Black boat-house. Now steer over to the Suffolk shore about E.N.E., and northerly, till the flagstaff and cupola of Landguard fort come in one S. ½ E., and this mark leads through the rest of the channel till the Black Granary comes in one with Walton Gravel Pit E. ¾ N. From thence a W.b.N. course clears the *Bone* and *Gristle*, and leads to Harwich anchorage.

To work in; keep the High light-house open west of the Low light-house. Stand towards the Halliday Flats by the lead, and towards Cliff-Foot till East Shotley Mortella tower (M) comes within its own breadth of the Ordnance Pile Jetty (N.b.W.) In standing towards the Altar, tack before the lighthouses come in one; in turning to the eastward across the Altar Flat, after rounding the Altar buoy, stand to the southward till the East Mortella tower comes in one with the Black boathouse; and to the northward, keeping Dover-court Mill well open of the Beacon Cliff. The clearing mark when standing towards the Glutton and Bone, is the flag-staff between the two western stacks of chimnies in Landguard Fort; but this leads rather nearer the Bone than the Glutton.

The Suffolk beach may be approached generally within a cable's length, except near Walton Ferry, where cement heaps are strewn about the shore. In working towards the town, when standing to the southward, keep Walton Gravel Pit open to the northward of the Black Granary; but the Shotley shore may be approached till the two Walton Mills and the Walton Mortella tower are in one.

The *Western Channel* is the most direct; it leaves the Altar buoy as well as the four small shoals, to the eastward, and follows along the edge of the Guard or Harwich shelf, carrying every where two fathoms, except on two small knolls of 11 feet.

This Channel can be taken only with a leading wind, or by a steam-vessel.

Directions.—From the fairway between the Altar and Cliff-Foot buoys, stand about N.N.E., till two small white beacons under Fagborough Cliff come in one, bearing N.b.E. ¾ E. and they will lead fairly in till a White Circular beacon and Shotley Mortella tower are in one about N.W. ¾ N. Then hard a starboard the helm, in order to place the vessel's head on the latter mark, which leads mid-channel, between the Guard and Gristle, to the anchorage off the town.

To avoid the Gristle, keep Walton White Ferry-house open to the southward of the Black Granary.

Besides the above there is a deep water channel of nineteen feet at low water springs, close round Landguard Point, but it is so narrow at present, that for a frigate, buoys or boats must be placed on either side.

When rounding Shotley Point, in order to cross from the Stour to the Orwell, keep the top of the high lighthouse open to the eastward of Harwich steeple, about midway along the roof of the church, bearing S.S.W. ½ W.; or, keep the low light-house well open of the Ordnance Pile Jetty. Either of these marks will clear the Horse Bank in 12 feet at low water.

A few Words in Defence of the Mercantile Marine of England. *By K. B. Martin, Master Mariner and Harbour Master of the Royal Harbour of Ramsgate.*

Sir.—Surely the press connected with our Mercantile Marine, has cried stinking fish quite long enough. I for one, hope they will be more temperate in their denunciations for the future. They have held up the officers and crews of our merchantmen to the ridicule of other rival competitors in the race of commercial enterprise, with as much anxiety as if the salvation of our country, its trade, its resources, and its proud position among the nations, were about to be lost or compromised by the fault of Poor Jack.

The mischief attending this ill-termed severity is beginning to be seriously felt. Intelligent Commanders of merchant vessels will tell you, that they have to combat its effects, wherever they let go an anchor in a foreign country, or solicit a return freight. They are met with the taunt, that—"The press of their country, the very Newspapers they are the bearers of, testify to the incompetency of their vessels and themselves." But is it so? Are our officers and men indeed inferior to those of other countries? So say the theorists! I for one deny the fact, where are the proofs? We hold up the casualties, discrepancies, and wrecks of our own marine, as a spectacle to the world; but we suffer the defects of other maritime communities to pass unheeded, nay, we screen them from observation by our encomiums on the superior skill and science imparted to them in their schools of Nautical Astronomy, and proved by their Boards of Examination. Is it come to this? The time was, when a British seaman, with a quadrant, like a hog's yoke, and a compass of primitive construction, fearlessly circumnavigated the globe! Such were they then emphatically described by a Patriot poet.

> "A Drake who made thee Mistress of the deep,
> And bore thy name in thunder round the World."

And now forsooth, because *ill found, over-loaded, short manned,* and *crazy old hulks,* are sacrificing our brave mariners by hundreds, we are to believe that the descendants of those hardy seamen, those *lead* and *look-out men,* have degenerated from the sterling qualities of their forefathers, and that a refined education is the first essential to a seafaring life.* When light-vessels and beacons were few and far between, when chronometers, sextants, artificial horizons, patent leads, and logs, and all the scientific auxiliaries of the present day were unknown, when middy drank out of pewter can, in lieu of china cup and silver mug, then, the mariners of England were admired for their *skill and prowess!!* While now, alas, with all these advantages, we are told they are not to be trusted, and preference is given for the conveyance

* How different the opinion which is exultingly asserted in an Ode to Ocean's Sovereignty.

> "Ne'er from the lap of luxury and ease,
> Can spring the hardy warrior of the seas,
> A toilsome youth, the mariner must form,
> Nurs'd on the sea, and cradled in the storm.

of cargoes in *Foreign bottoms*. But never mind! Let us return to the plain question. Where are the proofs of all this?

I have *some* opportunities for observation, and I shall advance nothing here that cannot be proved by Official documents.

The number of British vessels, for Foreign and coastwise, passing through the Straits of Dover, is very great, and no doubt far exceeds that of all the other nations, during the stormy months of winter, when our northern neighbours are ice-bound in their harbours. No matter from what quarter comes the wind, the offing is studded by British bottoms, and a few days of south-west gales congregate large fleets of our Merchantmen in the Downs, and under Dungeness.

It is at such times that some criterion may be formed, and some comparison drawn as to the seamanship of those who seek our harbours of refuge for shelter or repair. I have these statistics in my possession, and they afford the following results:—In the seven years ending December 31st, 1843, 8,691 British ships and vessels have been moored under my orders, and 1,606 Foreign ships and vessels in the same period.

Now one of the main points of attack upon our master mariners is, error in reckoning and judgment from defective education. The master mariners of other nations, we are told, are gentlemen, better navigators, because they have passed their ordeal before a Board of Scientific Examiners. It follows, that course, distance, and position are better ascertained, and that ships are kept more clear of dangers by these gentlemanly seamen! Avast heaving, and try the question fairly by authenticated facts:—In seven years 8,691 British vessels entered Ramsgate harbour for shelter; 25* of these were in distress from having been on sands or shoals in the locality; add to these 8 others belonging to Guernsey and Jersey, the total will be 33. In the same period 1,606 Foreign vessels entered under similar circumstances, and of that number, 48 were brought off the sands. Thus, the casualties to a fleet of British merchantmen were about four in a thousand, while with Foreigners navigating the same waters they amounted to thirty in a thousand. The flags they were under were as follows:—Russia 4, Prussia and the Hans Towns 8, Sweden and Norway 4, Denmark 5, Dutch 9, Belgian 4, France 7, Spain 5, Portugal 1, and Americans 1, total 48.

Such are the results here, and I believe, that an estimate made of our fleets in any navigation would be similar in proportion to the number of vessels, or of voyages made by, or past a given locality.

Those who disparage our mariners should compare their spirit stirring energy with that of any other people. Why, sir, we have Foreigners now skulking here ever since October, waiting idly for what they call a Strait wind for the Mediterranean; and when it comes it will not carry them the length of Cape St. Vincent, where, if it continues it will it be a noser for them—a Levanter right through the Straits. Really our mariners ought not to be continually carped at as they are; fleet after fleet have proceeded on their course while these idlers have been sticking in the mud. I would ask, in what latitude

* Seventeen of these were small coasters who are always creeping about among the shoals and sandbanks.

and longitude may we presume our ships are scudding along that left the Thames in October? Why, I see some of them have been spoken south of the equator by ships which have arrived at Liverpool; and these are the mariners that Foreign merchants hesitate to trust with their cargoes—humbug.

Now, in the list I have transcribed our Brother Jonathan only figures in one mishap, and this may seem extraordinary when we consider their trade to Northern Europe; but they generally pursue a very cautious and prudent line of conduct in navigating the straits of Dover. They do not run pell-mell into the Narrows John Bull fashion; but they heave to and take on board oversea pilots from Spithead and Cowes to carry them through the hazardous parts of the Channel and North Sea.* If our heavy ships followed this good example, we should not have to deplore the loss of so many valuable lives, and the destruction of so much property. It is said that Foreigners sail their ships cheaper than we can. As respects the current expenses they may, but their crews are more comfortably housed beneath deck, and their officers have more privileges independent of their salaries. Our master mariners have more to contend with than their predecessors, with fewer stimulants to meritorious exertion. A mistaken economy has deprived them of their private trade! they have very little interest in the property entrusted to their charge, with very little more salary than a junior clerk in the merchant's office. The present is to them generally a life of toil and privation; the future holds out little to hope for, and yet our theorists raise a hue and cry against them, they are not gentlemen! Education indeed! Few parents, if they knew it, would send a boy of education to face the *kennel*-like accommodation vouchsafed to apprentices in our merchant vessels. †

Give every master of a merchant vessel an interest in her preservation; if deserving, let him have a timber-head in her. If he undertakes to instruct a respectable youth in the art and practice of his profession, let him receive a remuneration from the parents or guardians in proportion to the voyage, or the charge which devolves on him!

Shipowners who have themselves been master mariners, know well how much the profit or loss of a voyage depends on the man upon whom the charge of all the property under his foot devolves, as soon as the stern-rope is let go, and the topsails sheeted home, and how much he has them in his power for good or evil; and it is their interest, as well as their duty to increase his respectability, aye, and his emoluments as far as circumstances will justify or allow. That done it would stimulate young officers to aspire to a command, and Boards of Examination would test their pretensions to appointments, which ought to remunerate their talents and servitude.

That such examinations would be a national benefit, I believe, and that certificates of different grades would excite a laudable ambition, and confer respectability on our rising marine is certain; but that our present race of officers and seamen are inferior to those of other

* Therefore, they may be said to owe much of their preservation to British care and skill judiciously employed.

† See some excellent remarks on this subjects in the early part of our last volume.—Ed.

countries I deny. I have them continually under my eye, and I know they have the same indomitable spirit bequeathed from generation to generation, the same anxiety to pursue their course, and to avail themselves of every shift which may favour them. Let not other nations deceive themselves by the croaking of a *one-sided Press*. I see Jack Tar as forward as ever in every John Bullish row; and I dare aver for him, that at the first pipe of the call, he will spring upon deck, and bid them *Come on!* They have been for ages the working and fighting bees of the British hive. If you mean to calculate on their stings, beware how you exhaust the honey, by robbing them of all the sweets of an arduous profession,—a profession which should meet with every support from a country whose political existence depends so much on the prosperity of its marine.

K. B. MARTIN,
Master Mariner and Harbour Master.

To the Editor, &c.
New Year's Day, 1844.

ON GAINING THE ANCHORAGE OF SANTA CRUZ, TENERIFE.

By Lieutenant Church, R.N.

SIR.—In your number for last April, I find a notice of the anchorage of Santa Cruz, Tenerife, by Mr. Bartlett, the Consul; in which he mentions that "the officers of several ships have considered it a ticklish place, and that the directions were extremely unsatisfactory."

Whilst surveying the Canary islands in the *Ætna*, we had of course considerable experience of Santa Cruz, and had no reason to consider it an unsafe anchorage. During the very many times that the *Ætna* was there, in only one instance did we experience a gale from the south-eastward. Most of the shipping slipped at the commencement and got into the offing; but we remained at our anchors and rode it out well. Although a heavy sea tumbled in, there was much less strain on the cables than might have been expected, arising as it appeared to us from an offset, which together with there being a great uphill drag for the anchor, diminishes the chance of driving.

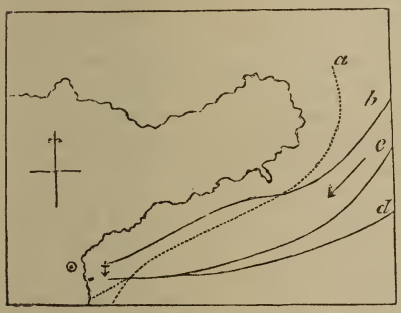
The Church tower with the cupola (San Francisco) open a little to the right of the Mole Head, is considered the usual anchorage, and vessels congregate here in order to be near the landing place. But in a man-of-war I would (especially if there are many vessels here) anchor considerably to the north-eastward or windward of this resort, the bank of soundings being wider, and to avoid having merchant ships in the hawse; indeed, I see no reason why ships should not anchor nearly as far north as the Paso Alto battery, the most northern battery, in case the roads are crowded with shipping.

I have noticed that ships coming from the north-eastward to Santa Cruz, run down at too great a distance from the land, and do not haul in until they get nearly abreast the town. They get a cast or two of the lead with no bottom, and immediately they get into soundings, the anchor is let go in a hurry, the bank being narrow and the ship's head inshore, there being little time for consideration.

Instead of this method of proceeding, I think it would be advisable on making the north-east end of Tenerife, Punta de Anaga, to haul in upon the bank of soundings immediately on passing Punta de Antiquerra, as indicated in the sketch, as from this point to Santa Cruz the bank extends as far out from the land as at the town, and the anchorage is just as good and as safe anywhere when abreast of the barrancos. I would get into the depth nearly that I wished to anchor in, and then run down with the light wind parallel to the shore. Besides having time to anchor leisurely, there is the advantage of being enabled, in case it falls calm, to let go an anchor under foot wherever you may be.

Should it fall calm while the ship is outside soundings, she may be taken away to leeward by the southerly set, which once caused us twenty-four hours trouble to get back again. From experience we latterly adopted the system I have mentioned.

W. H. Church.



The accompanying sketch of the east end of Tenerife shews the two common tracks to the anchorage off Santa Cruz, *c* and *d*, and *b* the proposed track; the dotted line *a* denotes the edge of the bank of soundings, which terminates close to the southward of the town, and the arrow points out the general direction of the trade winds and current.

On Mooring Ships.—*By Commander Harris, R.N.*

In reply to Lieut. Ryder, R.N.

Sir.—Your pages have already been the means of widely extending to our profession, the contents of a pamphlet written by me on the "Heaving down of Ships," &c., for which my best thanks are due. Will you kindly permit me again to appear in them to answer some remarks made (in your January number,) by Lieut. Ryder, R.N., who has also assisted me in calling attention to a subject that I was anxious to make generally known; and has, in criticising my observations on Mooring ships, more fully shewn the disadvantages of it, than I found room, or thought necessary to do. It ought first to be stated that the object of my publication was *practical*, not theoretical, or I should have adhered more closely to mathematics.

The angle that A makes with her anchors in the first position, where the strain is said to be double that on B's cable, was taken from the position that ships generally assume with regard to them, when moored with 75 fathoms each way, open hawse to a fresh breeze; and is the result of three or four observations. Lieutenant Ryder (as a mathematician,) should have found no difficulty in ascertaining this angle, since

the equation from which he says I have departed would readily have given it.

$$W = 2\,P \cos.\, a$$
$$\text{and } 2\,W = P$$
$$\frac{P}{2} = 2\,P \cos.\, a.$$
$$\therefore \cos.\, a = \frac{1}{4}$$

Practice afforded me the angle, while the clue to find it was left for the mathematician. I have never heard of a *sailor* mooring his ship so taut as to make the strain on the cables infinite, nor have I ever seen a ship moored so slack as (even at high water) to make the angle between the anchors so small as 120°. It was considered, therefore, unnecessary to mention these extreme cases, my object being, not to "split straws," or enter into mathematical controversy, but to call attention to an important subject.

Lieutenant Ryder may see that I had not overlooked his "critical angle," as he will find A when she has veered to 150 fathoms is in that "critical position," where B by following her example would be as little likely to drive or part, with the advantage of an anchor and 150 fathoms of chain cable to spare. But in the example given, B lets go her second anchor, which divides the strain with the first. The proportion of strain 88 to 100 was found by taking a certain depth of water (as an assumed case) finding the ground angle, and seeing how the strain was divided. Their numbers are, therefore, variable, and were put down merely to give a comparison. The "*equation* on which the relation between the strains depends" has been shewn not to have "been misapplied" in the second paragraph, and it has been used under assumed circumstances in the third.

I think it quite unnecessary to notice the remarks of Lieut. Ryder, on the advantage of veering with the mooring swivel on. They shew merely a desire to criticise my work, without seeking to benefit the service. With respect to laying down moorings,—if bridles are laid down so slack as to admit of a ship riding by them at an angle of 120°, no ship could be sure of anchoring clear of them; they are always laid down as taut as possible. I need say no more on this point.

I must not, however, conclude, without thanking Lieut. Ryder for bringing the subject under notice, and for going so much more into detail than I had done. My observations were purposely brief; as sailors (who are not acquainted with mathematics) dislike long papers with algebraic hieroglyphics in them. Lieut. Ryder's mathematical talents are too well known to require any compliment from me; he has kindly strengthened my position by showing how great and unnatural a strain a ship's cables are subject to when she is moored; this was all I desired. To lay down any fixed rule on the subject would be ridiculous, but when danger is known, it is easily avoided.

I have trespassed on your valuable pages longer than the subject warranted; open as they always are to anything that is really useful, I shall never seek to fill them with mathematical quibbles which are in-

teresting only to the writers. The disposition that Lieut. Ryder feels,* and modestly describes, as that of a "little half fledged bird," anxious to attack its companions, accords not at all with mine; my only object is the improvement and benefit of the service to which I have the honour to belong.

R. HARRIS,
Commander R.N.

To the Editor, &c.

METEOROLOGICAL OBSERVATIONS ON THE SOUTH-WEST COAST OF AFRICA.

Seasons.—On the west coast of Africa south of the equator, the rains begin generally early in November, and continue until the middle of April. They are earlier on the coasts of Angola and Benguela, and later to the northward of the Congo. To the southward of 10° S., there is occasionally not any rain whatever for several years; but sometimes in the months of November and December, it falls in excessive quantities, and the country then becomes in parts almost inundated. There was not any rain near Benguela during the years 1840, 41, and 42; but the appearance of immense water courses in which were large trees that must have been carried by the torrents many miles from the interior, amply corroborate this statement.

About Kabenda and Malemba the rains are very heavy, from the beginning of December until the middle of January. To the southward of 10° south, the months of January and February are very fine, but oppressively hot and sultry.

The months of March and April are the most unhealthy. This is owing to the exhalations from the earth after the heavy rains, which the light sea breezes are not sufficient to dispel.

From May to September are the most pleasant and healthy months, the sky at this time is generally overcast or cloudy; in the months of June, July and August a thick fog (called "the Smokes") prevails; it is not caused by exhalations, and is neither unwholesome nor unpleasant. Tornadoes occur in September and October, they generally blow from south-east, and are not nearly so violent as those to the northward of the equator, nor are they usually accompanied with heavy rain.

Winds.—From Cape Voltas to Cape Negro the wind blows constantly from south, a double reefed topsail breeze. From Cape Negro to Salinas it continues to blow up the coast from S.S.W.; it becomes more moderate as you get to the northward; and when to the northward of Cape Mary frequently blows from S.W., and W.S.W.

Between Salinas and the river Congo the prevailing winds are

* In justice to Lieut. Ryder, we must observe, that his words were "I cannot help comparing myself," from which it should not be imputed to him that he "feels" like the little bird to which he compares himself, an inference which the modesty he has expressed himself with does not justify.—ED.

south-west throughout the year. The sea breeze generally sets in about 1 P.M., from W.S.W., it gradually veers to the southward, and continues to blow from S.S.W. or south during the greater part of the night; and becomes very light or calm before daylight. When within ten or fifteen miles of the shore, the land breeze will reach you, and continue sometimes from sunrise until 8h. or 9h. A.M., but if thirty or forty miles off shore you will generally have a calm from sunrise until noon. The sea breeze occasionally sets in from W.N.W., and N.W., and this happens more frequently in the months of October, November, and December. During the "smokes" (in June, July, and August,) the winds are very light, and blow from south and S.S.E., during the whole twenty-four hours.

At the distance of 80 or 100 miles off shore, the south-west winds become more regular, they gradually veer round to the southward and eastward, and imperceptibly unite with the south-east trade. A line drawn from the Tropic of Capricorn in long. 5° E., to the meridian of Greenwich, in lat. 5° S., may be considered as the eastern limit of the south-east trade.

From the river Congo to Cape Lopez the land and sea breezes are not so regular. From October to April the winds here are almost constantly from S.S.W. and S.W.; and heavy squalls from S.W. and W. occur in December and January. From May to September the land and sea breezes are more regular, the latter at this time often set in from W.N.W. and blow during the night from S.W. and S.S.W; and then the land breeze is only felt close to the shore.

Currents.—A current is almost constantly running up the coast of Africa from the Cape of Good Hope to the River Congo, at the average rate of one mile per hour. It is here met by the impetuous stream of that river, which runs with undeviating regularity to the N.W. and N.N.W. at the rate of from two to four miles in the hour, until it unites with the equatorial current two or three degrees south of the equator. The stream of the Congo is felt at the distance of 300 miles from its entrance, and may be known by the clayey appearance of its waters, which are of a yellowish olive green colour. From May to October the current occasionally runs to the southward *close to the shore*, and continues to do so for forty-eight hours.

Rollers or Calêma.—A day or two after the new moon, in the months from May to September, a very heavy swell sometimes sets in along the whole coast from 3° to 15′ S.; this occurs more frequently during the smokes. It renders the open bays very dangerous to remain at anchor in, where the water is very shallow. At this time it is nearly a calm, never more than a very light breeze; you can easily warp outside of the heavier rollers by a small hawser; or, you may ride by a kedge anchor and hawser, when the chain cable would snap with jerks, caused by the sudden influx of a large body of water into the bay. During the period of the calêma you cannot land on the coast, except in the surf boats.

The bearings in the above remarks are all by compass.

Jan. 15, 1844. H. J. MATSON, *Commander.*

Recovery of H.M.S. Samarang in the Sarawak River, Borneo.

In one or two of our former numbers we have given, exclusively, notices of the accident which befel the Samarang, on her way down the Sarawak river in Borneo. Considering that some account of the manner in which she was recovered from her unfortunate situation might not only be interesting, but useful, and the whole transaction being, moreover, one which displays that fertility of resources, under any exigency, that forms so prominent a feature in the character of British seamen, we place the following narrative of it on record in the pages of the *Nautical*. A rough sketch of the necessary arrangements is also added, but which must be accepted rather as contributing to assist the narrative than as a representation of things *exactly* as they were.

On the 17th of July, the Samarang was dropping down the river, with the ebb having barely made, and as the ship was nearing the Narrows, where a bed of rock mid-channel almost bars the river, two kedges were dropped, one broad on each bow in order to bring her head to tide, and thus to drop her through in the deepest water. Three boats were also sounding. The ship, with six fathoms around her, did not appear to feel the tide, and to expedite her passage a third kedge was in the act of being run out on the port quarter to swing her into the line of stream.

The Royalist, towing down at the same moment impeded the boat, or caused her crew to flag. The anchor was, therefore, ordered to be let go. While the quarter warp was being run in the ship appeared to refuse moving, although the boats, as well as lines in the channel gave 4 fathoms.

The sounding boats, however, were too far before the beam, or probably had slipped the short cast near the rocks; thus affording no clue to the depth at her keel. Both bow warps were well taut, the captain was conducting the duty in person, on the bowsprit, and exclaiming "She must be touching abaft;" was answered "Four fathoms abaft, sir." The strain on the bow hawsers indicated that she held abaft; and, although the tide was very rapid they did not part, but stretched until she found her bed.

The best bower was quickly laid out; but on heaving it came home. The small bower was then laid out for next tide. The ship first heeled to port, but as the tide fell inclined to starboard, when hawsers were carried out from the lower mast-heads to the trees on the left bank in order to keep her upright. The tide had now become too rapid, and her inclination too great, to admit of getting at any spars for shores, which the rapidity of the tide, even *if they could* have been useful, entirely precluded being got over.

The hatchways were then battened down, and the ship having inclined but 22°, there was every reason to hope that she would right on the returning tide. The chain pumps were put in motion to free her from 9 inches reported, but the discs *overlapping*, by reason of the *trunks* not being carried *sufficiently high*, they were useless until a remedy could be applied. A sudden increase of *five feet* was now reported, and the carpenter immediately suggested, that it must arise from the water passing into the hold by the holes above the main deck shelf piece. These were ordered to be plugged, but this could not be effected in time to enable the chain pumps to help her. The water was subsequently found to flow in a *full stream* through the caulking of the *outer plank* and *inner spirketting* in each port.

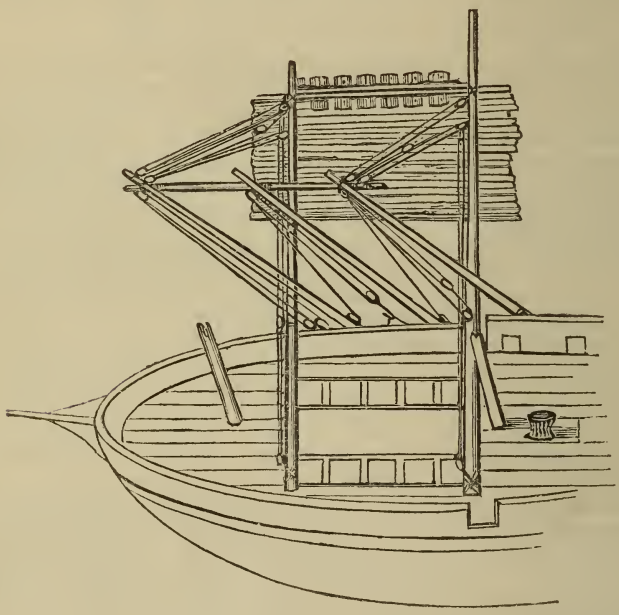
Incessant rain, and the crew having endured continued labour from 4 A M. until 8 P.M., and further, the ship being quite filled with water, compelled us to leave work, and seek for quarters at Keuching. Natives were hired to con-

struct houses for protecting the crew, as well as the stores and provisions, which were to be landed, and the ship lightened of her top hamper.

The 13-inch hamper cable was secured to trees on shore, and purchases attached to the fore and main masts to assist in righting as well as to prevent her shifting her position.

Three upright spars cut by the natives for raft timber were placed between the fore and main masts over the starboard side, their heels were in 3 fathoms at low water, and their heads nearly the height of the tops. Three three-fold purchases were brought from the heads of these on double runner purchase to the starboard main deck ports, and all hove well taut. At the last quarter ebb the air holes on the main deck were battened.

On the night of the 23rd an attempt was made to pump her out, but the leaks in the upper works were found to be too overpowering, which obliged us to await the spring tide when we could get at them, and caulk securely.



During this interval a large raft was constructed of timber, which had been cut by the natives, and having procured two out-riggers of 70 feet each, they were placed with their heels resting on the main deck beams, and their outer ends supported by the before-mentioned derricks, so as to relieve the ship entirely from their weight until the moment of action.

The outer topping lifts to the sheer, or derrick heads, were now increased to a double runner, and top purchases, led along the levers, and heavy luffs in readiness to clap on. If the raft failed to lift her, this powerful purchase would have been brought into play. The length of lever from the point of lashing at the main deck ports was forty feet. The ship had continued to fall until her utmost inclination amounted to forty degrees; the tide at high water being on the level of the port side of the capstan, and quarter deck combings. The guns, anchors, and contents of holds having been landed, and these

preparations complete, the crew were prepared by previous rest of five hours on the night of the 27th.

Before low water the pumps had cleared the holds to five feet *at* low water, the levers were eased down on the raft, to which we had just added a gang of casks at the outer extreme cross piece. On the raft taking its bearing the lashings were passed through the main deck ports, and over the main deck beams and the topping purchases hauled taut ready for service. The mast head purchases on the 13-inch cable to the shore also bore a good strain.

As the tide flowed, the levers began to complain, but on their attaining their fair strain the ship almost imperceptibly came up to 30° and shortly after gave notice that the sheers and raft incommoded her. They were suffered to fall outwards and the ship was hove off to her small bower, and at 2 A.M. on the 28th at dawn she shifted her berth to a safer anchorage, and about 10 A.M. resumed her moorings off Keuching.

On pumping her dry the hand pumps were found equal to the drainings, which consisted of a thick tarry fluid arising from the rope confined in the holds, the whole ship being anointed with it throughout. After washing, draining, and drying the holds, she was found to be perfectly tight.

The copper under the fore chains shewed a slight wrinkling, and divers were employed to examine the whole starboard side to the keel. They reported small pieces of copper off, but no other damage.

Examination of the Commanders of Merchant Ships.

At a time when so much discussion has been going forward respecting the propriety of establishing by law the examination of the Commanders of our Merchant Ships, it is as well to see what our neighbours the French are doing in this respect. We have, therefore, extracted the following regulations on the subject, from a Paris Almanac of this year for seamen, for which we are indebted to the considerate attention of Lieut. Sparks, R.N. It will be seen that there are several features in them arising from the form of Government in that country, which are at variance with English feeling. Still it cannot be denied that there are some stringent regulations affecting the discipline and navigation of a ship, the observance of which cannot but be attended with good effect.

Masters of the French Commercial Marine.

Conditions for filling the station of Captains in Foreign-going Ships, and Masters of Coasting Vessels.*

No one shall command a Foreign-going ship* or shall be master of a coasting vessel, before he is twenty-four years old; nor before he has been five years at sea (of which two at least shall have been served in vessels of the state), nor until he has been examined in the theory and practice of navigation.

He shall not be exempt from the condition required of having served in a vessel of the state, unless besides the five years of sea-time specified, he shall

* The term Foreign-going ship is adopted as expressing vessels going to any distant part of the world, in contra-distinction to "cabotage," or those keeping the coast.—Ed.

have undergone detention of more than two years in an enemy's prison, or shall have been declared unfit for the Royal Navy.

Candidates for examination must forward their names to the Secretary of the Chief Naval officer at their ports, and be provided with the following papers, viz. :—Certificate of birth, time of servitude, of good conduct from the Mayor, countersigned by the commissioner of their department, certificates from the captains of vessels in which they have served of their fitness and good conduct. These papers must be inspected and signed by the Commissioner of Maritime Inscription in the ports to which the above vessels may have returned.

They must specify besides in what Navigation school, or by what Professor they have been educated; and also the district of inscription where they wish to matriculate.

The examination for Captains of Foreign-going ships in *seamanship* will include, the rigging a ship, manœuvring ships and boats, and gunnery; that in the *theory* of navigation will consist of arithmetic, elementary geometry, plain and spherical trigonometry, navigation, the use of instruments and working observations.

For the masters of coasters the examination in *seamanship* will consist of rigging and manœuvring ships and boats, the knowledge of soundings and depth of water, the bearings of headlands and the positions of dangers, the currents and tides within the limits assigned to coasters on the shores of the Atlantic or those of the Mediterranean: that in *navigation* will include the use of the compass and chart, the use of nautical instruments and keeping a reckoning.

The examinations will be public. The candidates who shall have passed through the above examinations shall be duly declared qualified to receive their appointments as captains of ships or masters of coasters.

No one will be allowed to take command of a merchant vessel who has not been admitted to the general examination in conformity with the present ordinance.

The law of the 22nd April, 1832, concerning the whale fishery, art. 5, sec. 4, declares that,—

French mariners following the Whale fishery, desirous of being examined for the appointments of captains of foreign-going ships shall be exempt from serving one year in vessels of the state, on having made at least three voyages in that employment.

The minister of marine being referred to, respecting the application of this clause, has decided 15th Nov. 1838,

That mariners who have been five years at sea, which include three voyages in whalers, shall have permission to stay on shore, from the chiefs of their districts, the year following their return home, to undergo their examination for Captains of foreign-going ships. The chiefs will ascertain whether these persons are assiduous in their study of navigation, and those who are found defective or shall be rejected either in seamanship or navigation, shall be immediately sent to sea.

The examinations of candidates for the Captains of foreign-going ships and masters of coasting vessels will commence on the 1st of March, 1844, in the ports of the Northern coast, and on the 1st April in those of the southern ports. The former consist of St. Malo, Brest, L'Orient, Nantes, Cherbourg, Havre, Dunkerque; the southern ports are Toulon, Marseille, Cette, Bayonne and Rochfort. Examiners for the Northern ports are M. M. de Pannajon (Capitaine de fregate on half-pay) for seamanship; for navigation M. Fournier. Examiners for the Southern ports, M. Baudin (Capitaine de corvette on half-pay) for seamanship, and M. Lehuen for navigation.

Previous to the commencement of the examination, candidates must send their names to the Secretary of the chiefs of Administration or chiefs (de service) of the ports, and must take care to provide themselves with their certificates of berth and servitude.

To be second captain of a merchant ship a candidate must be twenty-one years of age, and have served four years at sea.

To embark as an officer a candidate must be eighteen years old, and have served eighteen months at sea.—Statute of 1st January, 1786, arts 43 and 44.

The law of the 21st of June, 1836, concerning masters of coasting vessels says,—

Art 1.—Masters of coasting vessels as well as captains of foreign-going ships are eligible to the command of ships employed in the cod fishery, either at Newfoundland and the isles of St. Pierre and Miquelon, or on the coast of Iceland.

To the mercantile marine there has been recently added a body formed and paid by the State, for their benefit, called Professors of Hydrography. Schools for this science are established in the principal commercial ports where the necessary instruction may be received to pass examination for captains and masters. There are four classes of professors; the places of the fourth class, which must be passed for before the others are given at the meeting.

No one can attend the meeting for examination who is not twenty-two years old at least, and who has not complied with the established law.

The government will give notice of the meeting, and the time it will take place, which will be always at Paris.

Candidates admitted to the meeting are examined in,—1st. Arithmetic; 2nd Geometry; 3rd, Plane and Spherical Trigonometry; 4th, Navigation, including the use of nautical instruments and working observations; 5th, Algebra and its application to geometry; 6th, the elements of the differential and integral calculus; 7th, Statics. In one of these sciences questions will likewise be given, to be answered in writing.

Examination of Master Mariners.

At a late meeting at Glasgow of Shipowners and Merchants, assembled for the purpose of furthering the object of Capt. Fitzroy's bill, we find that:—

Sir Thomas M'Dougall Brisbane rose to move the first resolution.—He did so with diffidence, as it might naturally be asked what could a military man know of the subject which was before the meeting? It would be necessary, therefore, that he should make a few personal observations, to show in what manner he became acquainted with, and interested in, those matters which now engage public attention. In the first place, he would tell them, that in 1795 he was going to the West Indies with the fleet which carried Sir Ralph Abercromby; they had severe weather for six weeks, in the course of which they lost the fleet, and having been told by the master of the ship in which he sailed that they were on the point of making the island of Madeira, he was called at four o'clock, and found the vessel in the midst of the breakers on the Coast of Africa. Here they remained till ten o'clock, and nothing but the providential circumstance of the wind blowing from the coast could have saved them. This event induced him to resolve to procure the best nautical instruments in future, and make himself independent of the ignorance of any shipmaster.

He was so successful in this, that in the course of his next voyage he was enabled to keep the ship's reckoning; and though he had crossed the tropics eleven times, and the equator twice, and been to America, and various parts of the globe, he had at all times since kept

a reckoning for himself. He conceived that lunar and other astronomical observations were of vast importance, and essential to the navigation of a ship, and yet out of the immense fleet with which he sailed in 1795, he did not know if there were a dozen officers capable of taking them. Yet such an essential element were these now considered, that the Admiralty had given instructions that no midshipman should be passed as lieutenant who was not able to take these observations.

With the assistance of the new Nautical Almanac, the latitude could be at all times known; it laid down the position of all the planets; and when, from the obscurity of the horizon, the stars could not be seen, they could still take their latitude from the planets, and with the same assistance the latitude could be defined whenever the stars were visible. There had also been a work recently published, a treatise on navigation, which contained almost all that the nautical astronomer could desire to know. It contained tables, in which were laid down the latitude and longitude of every particular part, compiled from the experience of a vast number of voyages by different ships, and it was altogether of such accuracy, that, in the event of a ship having gone wrong on its reckoning, this book gave the means of rectifying it.* He would allude to the subject of charts, with the view of showing their former incorrectness.

In leaving Jamaica on one occasion, and sailing through the Gulf of Florida, they found that one of their frigates had taken a prize, on board of which was a survey of the Gulf stream, taken by the Spanish officers during a series of many years. He took these surveys to his cabin, and, on examining them, found that, according to them, they should have been sailing on dry land, while they were on the sea. These blunderings were now, however, entirely remedied, and a person was authorised to sell the Admiralty charts, of which the correctness had been proved. He would give another instance of the ignorance of a shipmaster. In sailing to New South Wales, he had been keeping a reckoning, and learned from it that they would shortly make the coast of Brazil; and he remarked to the master that he had better bring the ship to. The master replied, however, that by his observations they were 500 miles from Brazil; but, when the day dawned, they were within a league of the coast, and close to that part where the Thetis frigate was lost. In some of the charts, too, it was known that Cape Clear was laid at 11° of long., while in reality it was 9° 28′, and it would happen, therefore, that in a captain proceeding to sea on this assumption, he would be a degree and a half wrong in his calculation throughout. But he merely mentioned these instances for the purposes of stating that the accuracy of books on navigation was now such that no such cases, if due attention were exercised, could occur.

In the city of Glasgow, which was so much interested in maritime pursuits, there should, he conceived, be some plan of regulating time, that the same accuracy may be attained here as at Greenwich. If such were done, an incalculable amount of good would result from it. It would even be of vast moment that a correct piece should be placed on such a central situation, say at the Calton-hill, where any person

* Lieut. Raper's Treatise on Navigation.—Bate, Poultry.

could go and set his chronometer by the precise time. The honourable gentleman then alluded briefly to the impression of magnetic observations, and the facilities which had been given of late years by the researches of Captain Ross and others, for taking these with due correctness.

There was only another point to which he would allude, and that was for the purpose of stating an opinion. It was this, that had there been in the case of the Pegasus, and other similarly unfortunate cases, an air-tight bulkhead placed in the forward part of the ship, the vessel with her crew and passengers would have been saved. It generally happened that the fore part of the ship was the first to come in contact with a rock; it was the first to strike, and were it constructed in the manner which he had stated, the ship would not go down from the injury she might receive in that part. He might mention that when at the taking of St. Lucia, a gun-boat, commanded by a lieutenant, was riddled through and through by shot, and the lieutenant was no doubt proud of the damage she had sustained; but she did not go down. She was built in compartments, and though she was riddled in some parts she was saved by the soundness of the others.

He would now propose the resolution with which he had been intrusted. It was, to request the committee to continue their exertions till the subject had been brought to a close by a legislative enactment.

[The masters of our merchant ships might very naturally enquire who Sir Thomas Brisbane is? and, why a soldier should step forward with his opinion on the subject. He has given them his experience among them, and has spoken from that experience; but the fact of his being an officer distinguished for his scientific knowledge, as well as his rank, and his having established an observatory in one of our most distant colonies, are claims sufficient to entitle him to be heard.

We might add to the cases he has given of the incompetency of masters, but that is unnecessary. He alludes to Raper's Navigation, a work which surpasses every other of its kind; but, he particularly remarks on the geographical positions it contains, a feature likely enough to be highly esteemed by the founder of an observatory who knows the value of a well determined meridian, and who, therefore, is well calculated to point out to seamen the great advantage of a series of good latitudes and longitudes over the string of contradictory raw materials taken as they are found, and which are met with in other works. We shall, however, conclude these remarks with an extract from the *Berwick Warden*, which speaks our own opinion on the subject before us.]

Many persons are either selfish or ignorant enough to contend that the cause of shipwrecks is an object of inquiry exclusively interesting to the shipowner—nay, some there are who would make one believe that no other class of the community has a right to inquire why so many disastrous and melancholy losses of both life and property have occured at sea within these few years past.

We will not condescend to combat so ridiculous as well as unchristian a position. The House of Commons, fortunately, has considered that life and property have a right to protection, as well by sea as by land; and the Report on Shipwrecks, which has just been published, although containing some objectionable matter, has conferred a benefit of no ordinary kind upon the commu-

nity, by exposing the defects of our maritime system, and pointing out the means by which they may be remedied.

Inquests and deodands, it is evident, are of no use. For years shipwrecks have been going on, and lives and property to an immense extent have been sacrificed to the grossest ignorance on the one hand, and to the vilest cupidity on the other, without creating any greater stir in the country than the short-lived commiseration which accidents of any kind have the natural effect of exciting. Incompetent mariners are still employed, and villainously defective vessels are still navigated, to the great endangerment of the public, and to the great scandal of a country calling itself commercial. Neighbouring states, much inferior in every other respect to Great Britain, take care that neither passengers nor property shall be sported with at the discretion of any branch of the trading world. Boards of examiners have existed in Denmark for a number of years, and ought to have shamed England long ago into the adoption of similar means of safety. The smallest sloop that enters the Tyne, from Denmark, contains evidences of the care and vigilance of the Danish authorities. No man is allowed to take charge of a vessel who is not competent; and cases of mates, much less of captains, who cannot write their names, are unknown throughout the Baltic.

Why are precautions of a similar nature not adopted in England? Why are needy adventurers permitted to traffic in human life, in old, good-for-nothing ships, to an extent at which humanity shudders? The utility and propriety of a pre-examination of vessels, are proved by the deference which is paid to Lloyd's Register by both shipowners and merchants. Every merchant of respectability hesitates before chartering an unclassed vessel. Why does not every shipowner hesitate before he navigates one? It is true, it may be urged that if life be lost in consequence of the incompetencey or negligence of the master, a coroner's jury may pronounce a verdict of manslaughter; or, in case of loss of property under such circumstances, the suffering party may obtain compensation, at common law, from the shipowner. But prevention is better than cure. The certainties are much more convenient, as well as salutary, than the uncertainties of the law. A statute prohibitory of the employment of incompetent ships and incompetent commanders, would afford ten times the protection to the public which is obtainable at common law.

When Captain Fitzroy recommended, with a zeal and perseverance alike honourable to him, a compulsory pre-examination of masters and mates, he was assailed as an invader of the rights of private property. Invader, indeed! Why, one would have thought that the most atrocious invasion of the rights of private property was committed by the man who, under false pretences, (for the law assumes that both vessel and crew are competent), seduces individuals to entrust their persons and their property on board of craft not only commanded by improper persons, but unfit, perhaps to be commanded by even competent ones.

The committee, therefore, have done the state good service by calling attention to the propriety of legislative interference for the protection of the public by sea as well as by land. They are of opinion, and we quite agree with them, that that protection will not be complete until the good character of ships, the competency of masters and mates, the supply of good pilots, as well as greater facilities in the shape of harbours of refuge, light-houses, and beacons, and a better attention to charts and compasses, shall have been secured by legislative interference.

Pacific Navigation and British Seamen.

We have been kindly favoured by Captain Simpson with the following extracts from his log, which contain information calculated to be highly useful to persons trading to the East Indies from this port:—

Extracts from the private log of T. Beckford Simpson, commander of the barque Giraffe, during a passage from Sydney to Manilla, by the eastern route.

January 19th, 1843.—Passed close to the position of a shoal on the middle ground, (so termed by the whalers,) saw no indication of it. Norie's chart for 1825, places it in lat. 23° 53′ S., long. 165° 10′ E. Captain Grimes, of the Woodlark, places it twenty-five miles to the westward of this position, and describes it as having 10 fathoms least water on it.

Shaped a course to pass to the eastward of the Brompton and Bellona shoals, between these and New Caledonia. The passage to the westward of these dangers is to be preferred, from its being better known; but at this season the trade wind generally hangs well to the eastward, making it rather scant for weathering Cape Deliverance, and it is now almost too late to attempt either the Bouganville, or any of the passages to the westward, as the line westerly monsoon is about setting in, when heavy north-west squalls and thick weather may be expected. On January 19th, altered the course in order to avoid a danger called by the whalers, the New Shoal. Its position is very imperfectly laid down in the charts, which is much to be regretted, as it is directly in the track of vessels taking this route; differerent authorities vary considerably in its longitude. Captain Allen and others who have seen it place it in lat. 20° 55′ S., long. 160° 28′ E. It is described as being covered with water, but the sea breaks very heavy on it.

The shoal on which the Tamar of Sydney, struck, is said to be in lat. 21° 21′ S., long. 161° 36′ E., and as it is reported to extend a long distance to the north-west, probably the two shoals are connected. There is said to be another shoal in this passage further to the northward not laid down in the chart; it is in about lat. 20° 5′ S. long. 160° 30′ E.

Saw several sperm whales in these latitudes; *rose* them for three successive days; observed also a quantity of their food, technically called squid.

In latitude about 15° 30′ S. lost the steady trade, and the wind became variable from the westward.

January 25th.—Sighted the high land about Cape Deliverance, and again saw many sperm whales.

From Cape Deliverance to Pleasant Island, which I made on the 1st of February, had for the most part westerly winds, with nearly daily violent squalls from the north-west, gradually veering round to the south-west; they were attended with much rain, and very vivid lightning; they generally commenced about an hour later each succeeding day. During one of these heavy squalls, on the 27th January, when in about latitude 6° 9′ S., long. 164° 15′, at 11h. 45m. A.M., observed the compass-card to revolve several times without any appa-

rent cause; this phenomenon might probably be occasioned by the effect of electricity on the magnet, the squall being charged at the time with a large quantity of electric fluid. It is worthy of remark, that during these heavy squalls there was no perceptible alteration in the barometer, it showing 29.75. In these latitudes experienced a constant current setting to the eastward, averaging nearly a knot an hour; during the easterly monsoon it changes its direction, and runs strong to the westward; due allowance ought, therefore, to be made by navigators in shaping a course in these seas.

Pleasant Island.—At 2 P.M., on the 1st of February, made Pleasant Island. This island was passed by Captain Fearns in the year 1789; upon his authority, Horsburgh places it in lat. 0° 20′ S., long. 167° 10′ E. Norie gives it the same longitude, and five miles more to the southward. I make the latitude of centre 0° 35′ S., which I find agrees with several ships that have sighted it. I had no opportunity of getting observations for the longitude, my dead reckoning from A.M. sight makes it about fifteen miles to the westward of the assigned position. This island is rather low, and could not, I think, be seen more than seven leagues from aloft, two round hummocks some distance apart are first visible, and as it is approached from the south-east, a very remarkable solitary tree, towering above all others, makes its appearance on the eastern extremity of the island. As I neared the land, several canoes came alongside, there were about eight or ten natives in each. They brought with them for sale a few very small fowls, some cocoa-nuts, and two or three straw hats; the latter they had been taught to make by the Europeans, these articles they were exceedingly anxious to barter for trinkets, beads, pipes, and tobacco; the latter were most in demand: they all appeared quite adepts in the art of bargaining. The men are about the middle size, well, but not robustly made, of a dark copper colour, with a very smooth sleek skin; they had no beard, hair black and strait; they have no affinity to the Papuan race, but are evidently, from their high cheek bones and irregular cast of features, of the Malayan descent; and from what I saw of the natives of the island of Ascension, one of the Carolines, North Pacific, I am of an opinion they are both sprung from the same origin. Four of the women came alongside, and if they were a sample, they may be considered rather good looking, having a very fine expression, black eyes shaded by a beautiful long dark lash, features regular, figure good, rather inclined to be stout; they appeared naturally graceful and easy in their manner; their dress consisted of a piece of native cloth round the waist; the men wore the maro—the usual dress among nearly all the Polynesian Islands—it is made of several tiers of dried grass, about eighteen inches long, strung together, and fastened round their waist.

Both sexes appeared to be very mild and tractable in their manner, but much addicted to pilfering; we detected several in the attempt; when threatened they did not deny the crime, or consider the expected punishment unjust. These natives, unlike their prototypes on the Island of Ascension in this respect, have no tradition of their origin, or the manner their forefathers first came on the island: they have no religion of any kind, neither do they believe in a future state; they appear, however, to have some slight idea of an evil spirit.

They are divided into seven or eight tribes, each tribe governed by a chief and queen, who presides over the whole; it is her duty to decide all disputes which may arise among the chiefs, and from her decision there is no appeal; in her also is vested the sovereign prerogative of making peace or war among the different tribes; and on all these occasions I am told she is implicitly obeyed. From what I could learn there were about 1,400 inhabitants on this island, which is only fourteen miles in circumference, and they are, I believe, rapidly on the increase, and fears are entertained that it will eventually be too small to support them. Their food consists chiefly of cocoa-nuts, the fruit of another description of palm, probably the pandamus, and fish, which are not very numerous. I saw none of the tropical fruits, which are generally very prolific in these islands, neither had they any bread fruit, which is the principal support of the natives on nearly all the Polynesian Islands. It might, however, be very easily imported from the adjacent islands, and from the climate and soil being well calculated for its growth it would doubtless thrive well.

When hove to off the island, an European came on board, who stated himself to be George Lovett, a deserter from the London whaler Offley. He brought off a list of the whalers, with their success, that had recently touched here.

This island, and many others in the Pacific, are infested by Europeans, who are either runaway convicts, expirees, or deserters from whalers, and are for the most part men of the very worst description, who, it appears prefer living a precarious life of indolence and ease with the unenlightened savage, rather than submit to the restraint of the salutary laws of civilised society; they live in a manner easily to be imagined from men of this class, without either law, religion, or education, to control them, with an unlimited quantity of ardent spirits which they obtain from distilling the toddy that exudes from the cocoa-nut tree. This spirit is not very palatable, but it serves, to use their own expression, to tickle the brain; when under the influence of intoxication the most atrocious crimes are committed by these miscreants, who must, both by their pernicious example and advice do much injury to this naturally mild and well-disposed race of men, and will retard considerably the great work of civilisation and Christianity whenever these blessings are offered them by the servants of God. These fiends frequently urge the different tribes to warrant deeds of blood, in order to participate in the spoils of the vanquished.

The following occurrences will tend in some measure to show the brutal manner in which these wretches live. They are in constant dread of each other, and by their deeds even horrify the untutored savage. I give them on the authority of the man Lovett, and from the clear and consistent manner in which he relates them, I have no doubt of the truth.

Lovett states that there are at present seven Europeans on Pleasant Island, named as follows:—Frederick Fisher, William Day, both deserters from the brig Clarence, of Sydney; William Ross, from the Lady Blackwood, Sydney; James Ashford, or some such name, from the

Rifleman, of London; Darby ——, from the Clarkston, of Sydney; and the steward of the William, of Sydney, name unknown.

Lovett says, last evening (January 31, 1843,) Fisher and Ashford came to visit Day and myself, and brought with them some of the island spirit to make merry with. Day got drunk and commenced quarrelling with the native woman he was living with, and beat her violently with his fist; Ashford (a lad of eighteen) interfered, and endeavoured to reconcile them, when Day went into an adjoining room, got a musket, took a deliberate aim at Ashford, and fired; fortunately the ball had been previously drawn, but this Day did not know; he acknowledged he thought there was a ball in the gun; the charge of powder entered Ashford's left breast, and injured him severely, the muzzle being within six feet of him. His recovery is at present very doubtful.

It was notorious, more especially amongst the Sydney whalers, who occasionally called at this island, and the fact was, I believe, not unknown to the government authorities in Sydney, that there were several runaway doubly-convicted felons who had cut a whale-boat out, and made their escape from the penal settlement of Norfolk Island, and were living in this place for several years. It appears there were four of these villains at first, two subsequently left in an American whaler, either to carry their pernicious influence to some of the adjacent islands, or proceed to America; the remaining two were well known by the names of Paddy and Jones; the former died of dysentery some time since, and Lovett gives the following account of the latter, who appears to have been a most desperate and depraved character. Lovett obtained his information from the natives who were present at the time, and I have since been confirmed in its truth by the testimony of the master of a whaler, who touched at this island shortly after the event alluded to took place.

It appears that on the 15th of October, 1841, eleven Europeans were deliberately murdered by the monster Jones, in the following manner: —He invited them all to visit him to partake of a feast, and when he had got his victims intoxicated with the island spirit, he gave them food in which he had previously mixed poison. This proved fatal to seven: the remaining four having refused to eat, he watched his opportunity and shot them. Most of these men are supposed to have been deserters from the Woodlark, Sydney whaler. The only cause which instigated the monster to this wholesale murder was jealousy, he being fearful that some of these unfortunate men might supersede him in his influence with the natives, over whom he had hitherto unlimited control. To remove suspicion from himself he endeavoured to make it appear that the deed had been perpetrated by some of the natives, which they indignantly denied, and in consequence withdrew their countenance from him, and he was subsequently compelled to leave the island clandestinely, in the American whaler Gidean Hauling, and was again landed by her on a small island three miles to the eastward of Pleasant Island, called Ocean Island, where he remained for eight months, and again returned in the London whaler Eleanor to Pleasant Island; but finding from the ill-feeling the natives had towards him, he could not remain with safety, he again left in an American whaler, and has

never since visited this place. Captain Stokes, of the whaler Bermondsey, reports having seen him since on Guam, one of the Marian islands, a prisoner in chains, and which report has been confirmed by Captain Bunker, of the Elizabeth; but whether he has been confined for any fresh crime committed there, or given up by some vessel as a runaway convict, does not appear. It is most likely to be the former, as I do not think the Spanish government would interfere in the latter case.

On my passage down to China, I went on board the ship William Gillies, from Macao, and learnt from her that Jones had arrived there from Guam, and was anxious to ship for England. Jones was personally known to some of the Gillies' crew.

It is to be feared that these horrible scenes of bloodshed and depravity are of frequent occurrence amongst the Polynesian Isles, more especially to the westward, where no effort has hitherto been made to introduce civilisation and Christianity. Vain and futile will be the attempt, whilst these miscreants are permitted to remain with the natives, corrupting them by their baneful examples and selfish advice, introducing intoxication and disease in its many horrible forms, and teaching these naturally mild and tractable race of men the grossest depravity. In many of these places the Europeans are very numerous; on the island of Ascension, which I visited in 1841, there were upwards of sixty, and will, doubtless, should opportunity offer, cut out any vessel which might be tempted to stop at this island in order to obtain refreshments, as it lies immediately in the track of ships going the eastern route from Sydney to China. Masters of vessels should, therefore, be cautious how they approach—the strictest vigilance is necessary to prevent surprise.

It would be advisable for the government occasionally to send a man-of-war to visit these islands; her presence alone would be very beneficial in keeping these men in check, as there is nothing they dread more than a vessel of that description. They are generally very cautious in not boarding a vessel until they have ascertained her character and force.

Lovett also informed me there was a white man on this island, who had been living there for many years; he is quite a European in appearance, and is thought to be either one of the boys belonging to the John Bull or Princess Charlotte, both which vessels were supposed to be lost or cut out near this island, and he is thought to be either a lad named Backs or Le Burn. The following is his description:—Apparently about thirty-four years of age, but probably younger; complexion is inclined to fair, whiskers red, hair light and disposed to curl. He is not permitted by the natives to associate with the whites, nor is he allowed to go on board any vessel. He cannot speak English, but appears to understand it.

[A similar magnetic phenomenon to that here noticed, is related by Capt. Graah, in his Voyage to Greenland, p. 18.]

Acceleration of the Overland Mails.

75, *Old Broad Street, London, 23rd Nov.*, 1843.

Sir.—I beg leave to submit for your consideration the accompanying suggestions on the practicability of accelerating the communication between Great Britain and China.

Your zealous co-operation in obtaining for this important question, the attention which it so justly merits, will indicate the existing necessity of improved arrangements for the transmission of the China correspondence, and essentially contribute to secure their eventual adoption.

I am, &c.,

To the Editor, &c. Henry Wise.

Proposed Route from Hong Kong to London, and vice versa.	Course.	Distance. Miles.	Average Rate Miles per hour.	Interval Underway.		Interval at Anchor.		Total Interval.	
	° ′			D.	H.	D.	H	days	H.
Hong Kong to Pulo Labuan	S. 2 18 E.	1009	7	6		1	12	7	12
Pulo Labuan to Singapore	S. 69 23 W.	707		4	6		12	4	18
Singapore to Malacca	S. 64 48 W. 19 N. 51 41 W. 103	122			18		6	1	
Malacca to Pinang	N. 30 37 W.	222			1	8		16	2	
Pinang to Ceylon	N. 82 24 W. 303 S. 89 45 W. 916	1219		7	6	1	12	8	18
Ceylon to Aden	As now performed by the Peninsular and Oriental Steam Navigation Company, detention of 2 days included							11	
Aden to Suez	. . . 2 "							8	
Suez to Alexandria	. . all stoppages "							3	
Alexandria to Malta	. . . "							4	
Malta to Marseilles	. H.M. Post Office Packets							4	
Marseilles to London	. Regular course of Post							5	
Total from Hong Kong to London, and vice versa, by the proposed route..								59	
Average interval of transmission of China Correspondence, via. Calcutta and Bombay, during the last Twenty Overland Mails, viz. from 10th October, 1841, to 6th May, 1843, ...								89	
Difference of Time in Favor of proposed Route								30	

Duties at Anchor.—At Pulo Labuan, to receive Coal; at Singapore, to receive Coal, and land Mails; at Malacca to land and receive Mails; at Pinang, to receive Coal, land and receive Mails; at Ceylon, ditto; also receiving at Ceylon the Outward Overland Mail from England, and returning therewith to China.

Homeward Overland Mails.—Average interval from Bombay 39 days, from Madras 48, from Calcutta 49, from Singapore 75, from China 89.

Mem.—I have adopted an average rate of seven miles per hour as a fair estimate of the speed well-appointed Steam Vessels, of moderate size and power, will be enabled to accomplish and maintain, throughout the proposed route, at all seasons of the year; for, during the whole distance from Pinang to Aden, and vice versâ, neither monsoon, from

the course steered, becomes at any period a directly adverse wind, an advantage which the route hitherto observed, does not possess. Assuming that the Honorable East India Company continue the management of the Bombay line, and that the Peninsular and Oriental Steam Navigation Company are encouraged to render their operations more comprehensive, by the establishment of Branch Steamers between Ceylon and Singapore, to which latter Port Her Majesty's Steam Vessels on the China Station could convey the mails from Hong Kong, this all-important object, might without difficulty, be attained. The advantages to the Straits Settlements, consequent on the adoption of improved arrangements, require no comment; and the *practicability* of effecting a very considerable acceleration of the communication with China, is evident from the simple fact, that the average interval which has occurred in the transmission of letters from China, by the last twenty Overland Mails (irrespective of the unfortunate July Mail from Bombay,) exceeds the period occasionally occupied by fast-sailing ships, in accomplishing the voyage viâ the Cape of Good Hope.

London, 14th September, 1843.*

P.S.—9th October, 1843. The arrival at Suez on the 16th ult. of the Honorable Company's Steamer Akbar, in 46 days from Hong Kong, after accomplishing the passage down the China Seas, against the south-west monsoon, unassisted also by any previously arranged facilities for coaling, exchange of steamers at Aden, and other manifest advantages requisite for the proper execution of this important service, confirms the correctness of my estimate for performing the voyage from Hong-Kong to Suez, or vice versâ, viz. 43 days, including stoppages.

Passage from Ascension and St. Helena to the Coast.

25, *Westbourne Place, Jan. 23rd,* 1844.

Sir.—I return the chart with some of our tracks, and the compass direction of the winds; the latter I have scarcely ever found to vary in sixteen passages that I have made between the coast and the islands. You will perceive at a glance how easy it is to make the passage direct from the islands to the coast on the starboard tack; but until I made the passage from Ascension to the Congo, in Feb. 1840, it was the invariable practice of H.M. vessels to stand to the southward from Ascension until they could weather St. Helena, a dead beat of 7 or 800 miles. A stranger would certainly consider the latter to be the preferable route, for he would not believe it possible to reach Benguela (appearing to him 1600 miles dead to windward,) by keeping on the starboard tack; and the knowledge that the wind generally blows up the coast from the southward, with a lee current, would cause him to be more afraid of approaching the coast, and having to beat against it. Two precautions are however requisite, viz., not to go to the northward of 3° or 4° S., and not to bring your port to bear to the southward of S. 35° E., (true) an occa-

* Date of submitting the above proposed route and estimate to H.M. Government for consideration.

sional short tack, as the wind veers a little, may therefore be necessary; but the whole passage may sometimes be made with a flowing sheet.

Horsburgh and others recommend vessels, even when bound from St. Helena to Benguela, to stand to the southward and run their longitude down with the westerly winds; whereby the passage is more than doubled. This must have been owing to a want of knowledge of the prevailing winds between the island and the coast, which I have before stated, vary very little in their direction 100 miles off shore.

I am, &c.,

H. J. MATSON.

[The importance of this letter will not be lost on our African Cruisers.—ED.]

HURRICANES IN 1837.

WE have extracted the following observations on a Hurricane in which a Packet was dismasted in the Gulf of Mexico, in October, 1837, from Lieut. Jennings' work "Hints on Sea Risks."

She experienced heavy gales from the northward for four or five days preceding. Barometer mostly at 29·60. On the day of the hurricane, it fell to 28·60 by 6 A.M., and the hurricane began at about 8 or 9 A.M. The wind from having been N.N.W., shifted to N.N.E. At noon it moderated, and became fine for half an hour, but the barometer did *not* rise. The wind then gradually freshened from the south-east, and it blew harder than ever. The ship had no canvas set, but was hove on her beam-ends by the force of the wind. She righted on cutting away a lower mast.

HURRICANE 1837.—To shew the irresistable force and power of a hurricane, I may mention that in January, 1839, I was in the land-locked harbour of St. John's, in the island of Porto Rico, where I saw six large vessels on shore to the southward of the town, which had been wrecked there in the hurricane of 1837. They were quite up in the country, being between two and three hundred yards from any water. I never saw vessels in such a situation. The water was said to have risen thirty feet.

SEAGULL PACKET IN THE SAME HURRICANE.—To shew what may be done by sound judgment, prompt decision, and good seamanship, the following facts may be stated; at the very time these vessels were wrecked in the land-locked harbour of St. John's, Porto Rico, H.M. Packet *Seagull* (Lieut. John Parsons, R.N., Commander,) was caught at sea in the Gulf of Florida, (a dangerous navigation at all times) in the same hurricane. She was on a lee shore, in four and a half fathoms of water, with all her sails split, and blown out of the bolt ropes. Lieut. Parsons was therefore under the necessity of anchoring, which he did, and veered to one hundred fathoms of chain; he did not let go the other anchor, fearing she might founder, as the sea was making a

fair breach over her, and rolling aft to the wheel on the quarter deck.* Lieut. Parson's skill and conduct upon this occasion most probably saved the vessel and crew. He was not however content with this, but would not even leave his anchor and a few fathoms of chain behind him, but hove it up in a heavy swell and sea, as if he had been going out of harbour.

Many persons would have slipped, in order to get sea room from the reef as soon as possible.

Nautical Notices.

Grenada, Aug. 30,—*Extract of a Letter from Com. A. Drew, H.M.S. Wasp.*—Her Majesty's Sloop made a survey of the shoal situated between the islands of Tobago and Trinidad, as also of a reef lying off the south-west extremity of the island of Tobago.

The first mentioned shoal is an extremely dangerous one, having only from seventeen to twenty-one feet water upon a considerable portion of it, and lies directly in the channel of vessels going from Tobago to Trinidad, as also of vessels coming from Demerara, and rounding the southern extremity of Tobago on their voyage home.

The shoalest part lies S. 20° W., from Brown's or Crown point, distant about two miles and a quarter, and from Point Columbus, Island of Tobago S. 67° W., distant about three miles and a quarter, and upon the ebb tide there is generally a current of three miles an hour setting about N.b.W., probably caused by the outlet of the waters from the river Oronooko.

Giedser Light.—*Falster Island.*—This light which stands on the south point of Falster Island, at the entrance of the Baltic, has been recently improved by the addition of lamps and reflectors, being rendered more distinct and visible from seaward in all directions.

Santa Anna Light.—It is stated that no confidence is to be placed in this light, it being worse than useless, the machinery out of order, the lamps and oil bad, and the attendant drunk.

Kingsbridge and Salcombe Harbour.—A Committee has been formed for the purpose of beaconing the entrance of this harbour and providing a life-boat.

Rover Shoals, *Mozambique Channel.*—We learn from Captain Baker, r.n., late in command of H.M.S. *Lily*, that in addition to the two shoals of this name, to the eastward of the Comoro Islands, a third of the same extent as the two others, lies about the same distance to the westward of the Western shoal, as this is from the Eastern, and in the same latitude. We therefore caution ships accordingly.

* See Reid's Law of Storms, p. 51.

Roderiguez.—In our last we inserted a notice of the extent of the reef to the westward of this island which with the wreck of the ship lost on it, will serve as a warning to seamen to give it a good berth, until a survey of it and its outlying dangers shall have been made. But we are informed by Captain Baker, R.N., late in command of H.M.S. *Lily*, that a dangerous reef lies to the eastward of it in the same parallel, and near the meridian of 67° E. This will be a sufficient caution to the numerous vessels passing and repassing its neighbourhood to be on their guard, until more explicit information can be obtained respecting it.

Hydrographic Office, Admiralty, January 22nd, 1844.

Light in the Piombino Channel, *Mediterranean*.—The Grand Ducal Government of Tuscany, has given notice that a small fixed light, was exhibited on the 15th inst., from the tower on Palmajola Island, in the Piombino Channel, in lat. 42° 52′ 6″ N., and long. 10° 28′ 50″ East.

This light is 338 feet above the level of the sea, but from its minuteness, it may not be visible beyond the distance of five miles.

It will continue to be shewn every night until replaced by a more powerful light, which is now preparing, and of which due notice will be given.

Skerryvore Lighthouse.—The Commissioners of the Northern Light-houses hereby give notice that a Light-house has been erected upon the Skerryvore Rock, which lies off the Island of Tyree, in the county of Argyle, the Light of which will be exhibited on the night of 1st of February, 1844, and every night thereafter, from sun-set to sun-rise.

The following is a Specification of the Position of the Light-house, and the appearance of the Light, by Mr. Alan Stevenson, Engineer to the Commissioners.

The Skerryvore Rock lies off the Island of Tyree, in lat. 56° 19′ 22″ N., long. 7° 6′ 32″ W.

By Compass the Light-house bears from Barrahead Light-house S. ¼ E., distant 33 nautic miles; from Hynish Point, in Tyree, W.S.W. ½ W., distant 10¾ miles: from Iona Island, W.N.W. ¾ N., distant 20 miles: from Rhinns of Islay Light-house, N. ¼ E., distant 44 miles; and from Innistrahull Light-house, in Ireland, N.E. by N., distant 53½ miles.

Owing to the distance to which the foul ground extends on every side of the Rock on which the Light-house is placed, and the weight of sea which breaks on the shallow ground all round it, it is necessary to give the light a wide berth. The better to enable seamen to judge of this, their attention is called to a Chart, prefixed to a separately printed notice, which exhibits the relative position of the Skerryvore Rock, and the various dangers around it. In particular, it is necessary to notice the position of those Rocks which lie seaward of the lighthouse, viz.,—Mackenzie's rock, about 3 miles W.b.S. ¼ S. from the Light-house; Stevenson's 2¼ miles W. ½ N., and Fresnel's, which lies between these two rocks.

The Skerryvore Light will be known to mariners as a revolving light, producing a bright flash once every minute. The lantern which is open all round, is elevated 150 feet above the level of the sea. In clear weather the flashes of the light will be seen at the distance of six leagues, and at lesser distances according to the state of the atmosphere; and to a near observer, in favourable circumstances, the light will not wholly disappear between the flashes.

And the Commissioners hereby further give notice, that by virtue of a warrant from the Queen in council, of date the 13th Dec. 1843, the following tolls will be levied for voyages in respect of which benefit will be derived from this light, viz., from every British vessel (the same not belonging to her Majesty, or

being navigated wholly in ballast), and for every Foreign vessel which by any Act of Parliament, Order in Council, Convention, or Treaty, shall be privileged to enter the Ports of the United Kingdom of Great Britain and Ireland, upon paying the same duties of tonnage as are paid by British vessels (the same not being navigated wholly in ballast), the toll of One Penny per ton of the burden of every such vessel; and for every Foreign vessel not so privileged, the Toll of Two-pence per ton.

By order of the Commissioners,

(Signed) C. CUNINGHAM, } *Joint Secretaries.*
ALEX. CUNINGHAM, }

Edinburgh, 23rd December, 1843.

SHOAL IN THE GILLOLO PASSAGE.—The barque Athena, from Singapore towards China, by the Eastern Gillolo passage.

H.	K	F.	Courses.	Winds.	LW	Bar.	Therm. Air	Therm. Water	Remarks, Jan. 24, 1843.
1					These 24 hours commence with a moderate breeze and fine pleasant weather, smooth water sailing along the east side of the Island Gazy, distance about three miles, and every appearance of a clear passage by the chart. At 2 PM. the look out on the fore yard discovered rock under the beam of the vessel, sounded in 10 fathoms; next cast of the lead 5 fathoms, immediately wore ship, and in the act of veering the vessel slightly struck, but did not lose her way; and was immediately in deep water. The course steered along the island was E.N.E., distant off about three miles, and when opening the N.E. point, which has several remarkable trees upon it bearing N.b.W. you will not be far from the shoal, which is very dangerous. I had not time to examine the shoal for I was glad to get into deep water, and take the passage between Gaby and Gazy. Tack ship occasionally. Lat. observed 0 0.			
2									
3				N.N.E.					
4			E.N.E.	N.E.					
5									
6									
7									
8									
9									
10									
11									
12									

NAVAL CHRONICLE.—Jan. 18th, Vice Admiral Sir John Chambers White, hoists his flag in the Camperdown, at the Nore, succeeding the late Vice Admiral Sir E. Brace.

Jan. 15th Mr. Bankhead Chargé d'Affaires to Mexico, sails for his destination, in the Helena, 16, Commander Sir C. Ricketts.

Jan. 16th, Hon. Mr. Pakenham, Ambassador to the United States, sails in the Vestal, 26, Capt. C. Talbot, for New York.

THE WIND.—Experiments of an interesting character have recently been made at Rochefort, France, with a newly invented instrument, constructed as follows:—

A thin plate of wood, three or four inches long, is suspended so as to vibrate freely, like the needle of a magnet on a pivot of steel, by means of a cup of agate inserted in the wood. At one extremity of the wooden plate, extending about one-third of its length, is a fissure, in which are adjusted three or four magnets, ranged in a straight line, at the distance, one from another, of half an inch. These magnets are very light, made of watch springs straightened and cut in small pieces, and varying in length from one to three inches. They are set in a direction perpendicular to the horizon. Consequently their polarity is neutralized; but the south pole of each is made to point below, and its north pole above the plane of the wooden plate. The instrument, when placed on a table, in a room, and under shelter of a glass bell, at the expiration of some seconds, takes the direction of the prevailing wind, the end furnished with magnets acting the same part as the point of a vane.

The experiments made with this instrument, remarks the *Journal of Commerce*, suggest some interesting inductions, both in reference to the connection of magnetism with electricity, and to the probability that variable winds are the result of electric currents. But that which gives to the invention its highest value is, perhaps, the fact that it indicates any approaching change in the direction of the wind, from a quarter to half an hour before its actual occurrence, just as the barometer indicates in the weather.

Royal Naval Benevolent Society.—The friends and supporters of this excellent institution on Monday assembled at the Thatched House Tavern. St. James's-street, Capt. Feade, R.N., in the chair. From the report of the Society it appeared that there is "a marked and continual increase of the Society's finances since the last report." The report stated that by the energies of its members, aided by the munificent donation of £1000, from Sir Thomas Williams, the nucleus of an establishment has been formed, from which eighty-three families of deceased members, and other officers, are reaping advantages, which, to their daughters, will be far more valuable than any present pecuniary relief within the means of the Society. In the course of the address of the Secretary, after the report had been received and adopted, he stated that the contribution from the public since last year was almost *nil*, which he attributed to the pressure of the income tax. The balance in the hands of the Society to be distributed among applicants amounts to upwards of 5000*l*. A number of new cases of applicants for the relief of the Society were brought forward and their merits canvassed. A sum of 25l. was voted for Captain Tucker's children.

Since the court last sat, eighty new applicants have appeared.

Shipwrecked Mariners' Society.—A meeting of the Southampton Auxiliary Branch of the Shipwrecked Fishermen and Mariners' Benevolent Society was held at the Audit House on Tuesday last, Admiral Dick presiding; when it appeared that the subscriptions and donations for the year just ended amounted to 51*l*. Thirty-one mariners had been relieved by sending them to their homes since 22nd May last. The general report of the whole Society for the year ending 31st March, 1843, was read, which states that temporary relief had been afforded to all applicants coming within the rules and regulations of the Society throughout the kingdom: and that the number of cases relieved was 122 widows, 441 children, 105 aged persons, 1,098 shipwrecked persons; at an expenditure of 3,783*l*. The sum collected during the same period by donations and subscriptions, 3,800*l*. The annual subscription of half a crown, a sum too small to be felt by the subscriber, affords the Institution the means of rendering great assistance to a deserving class of society.—*Hants. Advertiser.*

Her Majesty's steam-vessel Lizard.

[We have received the following from Lieutenant and Commander Postle and Officers.]

It is not generally known that, after the calamitous fate of Her Majesty's steam-vessel *Lizard*, on the night of the 23d July last (through being run down by the French war-steamer Veloce), such was the noble feeling of the ship's company of H.M.'s ship *Indus* towards the crew of the *Lizard*, when they were received on board that vessel, that they with one accord came forward in the most handsome manner, and subscribed for them the large sum of 75*l*.; one of the many instances of the generous character which a British seaman has ever borne and justly deserves.

The Commander and Officers also of Her Majesty's late steam-vessel *Lizard*

cannot sufficiently express the gratitude they owe to the Officers of Her Majesty's ship *Indus*, for the great hospitality and sympathy they evinced towards them in their distress. Their best thanks are likewise due to the officers of Her Majesty's ship *Malabar*, for the kind manner in which they were treated when on board that vessel; nor can they easily forget the kindness shown them by Mr. Louis, of the Montrose, and Mr. Evans, of the Liverpool, Oriental Steam Company's packets, by whom they were conveyed to England from Gibraltar; including also Mr. Smith, Agent.

To the officers of the sister service, and to the merchants and tradesmen of Gibraltar, they beg to repeat their most heartfelt thanks, for the great attention received from them, which can never be erased from their memory.

To the *Locust* the officers of the *Lizard* also feel indebted.—*N. & M. Gazette.*

Wrecks of British Shipping.

(Continued from p. 54.—cs. crew saved—d. drowned.)

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Abbotsford 54	———	———	London	———	Algoa Bay	Oct. 20.
Arthur and Eleanor	Liverpool	Russell	Londonder'y	Glasgow	Milford D	Dec. 5, cs
Astrea	Exeter	Bevis	Sunderland	Portsmouth	Flamb Head	Dec. 12 cs
Bernard	London	Dumble	Quebec	Chatham	St. Lawrnce	Dec.
Bess	Dundee	———	———	———	———	Dec. 30.
Bolivar	Bristol	Wheate	Siera Leone	Falmouth	abandoned	Aug. 23 cs
Carib 60	Halifax	———	Halifax	Trinidad	abandoned	Oct. 3, cs
Caroline	Greenock	Crawford	Grenada	St. John	Goldbor'ugh	Nov. 21 18d
Charles Heseltine	———	Washingtn	Trinidad	New York	Hatteras	Nov. 12 cs
Dampier	Whitby	Feaster	Hartlepool	London	abandoned	Nov. 23 cs
Elizabeth	———	King	Algiers	———	Barbary	Nov. 19
Falcon 65	———	Day	Quebec	Bridgwater	St. Lawrnce	Nov. 22
Jane	P. Gordon	Reid	P. Gordon	Aberdeen	Banff	Dec. 22 cs
Josephine	———	Fawcett	Quebec	Glasgow	St. Lawrnce	Nov. 22
Lawson	———	Cliffe	Goole	London	Scroby S.	Jan. 8 cs
Margaret	———	Balfour	Liverpool	Charleston	S. Breaker	Dec. 13 cs
Mary 70	Belfast	Hamilton	Quebec	Liverpool	Port Nœuf	Nov. 22
Marys	Newcastle	Robertson	———	———	C, Scotland	Jan. 3 cs
Nabob	———	Wilson	Calcutta	Liverpool	Caernarvon	Dec. 21 cs
Neptune	———	Watson	Berwick	Goole	foundered	Dec. 15 cs
Neptune	———	Reid	Quebec	Aberdeen	St. Lawrnce	Nov. 22
Old Year's Gift 75	Boston	———	———	———	Wainfleet S.	Jan. 9 cs
Oxford	———	Marshall	Calcutta	London	Roderiguez	Sept. 1 cs
Phœnix	———	Turner	Mirmichi	Gloucester	Langley I.	Nov. 26 6s
Quebec	———	Chissel	Quebec	London	abandoned	Dec. 2
Rose	Cork	Williams	Newport	Rouen	at sea	Dec. 31 cs
Sapphire 80	Newcastle	Hall	Restigouche	Peterhead	ScotstownBr	Nov. 14
Sir CharlesCockerell	———	———	———	———	Cur. Muria I	Nov. 10
Sir James Cockburn	London	Davis	Whaler	with 1100 brl	ot oil Muscat	Oct. 28 cs
Tempest	Sunderland	Oliver	materials	found at	Sonderhoe	Dec. cd
Thorntree	Stockten	Barrick	Wyburgh	Hull	Lessoe	Nov. 28
Thistle 85	Aberdeen	———	———	———	Norderney	Dec. 11
Wanderer	———	———	Dublin	West Indies	Sluice Bk	Jan. 5 cs
Welsford 87	———	Davis	Quebec	London	St. Lawrnce	Nov. 23

56.—Foundered. Crew landed at Yarmouth.
57.—Fragments and cargo strewed along shore, and it is feared all hands have perished.
59.—Crew saved by the Adrastus, Chaplain, and landed at Port Praya.
61.—Lost on Cranberry Point, State of Maine; eighteen drowned out of twenty-two.
68.—Crew could not land, but were saved by the brig Alpha of North Shields, and treated with great kindness by Mr. Cuthbertson, her master.
73.—After striking on the Salt Scars.
76.—Crew and passengers landed at Mauritius by the John Renwick. Ship valued at £20,000. Loss attributed to defect in Admiralty charts.
79.—Foundered about six miles south of Lundy, master and crew landed at Mumbles.
81.—The master and some of crew went to Mauritius, and the Imaum of Muscat sent the rest to Bombay with every means of comfort.
84.—Supposed drifted up Cattegat, and driven on coast of Norway.
87.—Left on shore below Bic with eight feet water in hold and pumps choked.

Surveying Expedition to Torres Straits.

The *Fly*, 18, Captain F. P. Blackwood, and *Bramble*, 10, Lieut.-com. Yule, tender to the *Fly*, which vessels left Devonport in April, 1842, on a surveying expedition to Torres Straits, have been reported as having made some considerable progress in their labours in that latitude. The objects of the expedition were:—

1. The survey of the exterior or eastern edge of that vast chain of reef which extends from Breaksea Spit to the shores of New Guinea.
2. The thorough examination of all the channels through the Barrier Chain, with detached plans of those which offer a secure passage.
3. To devise some practical plan of marking the channel by beacons of wood, or stone, or iron, upon the outer islands or bays, to guide the navigator to a sure and certain landfall, the erection of which will have to be performed by colonial resources.
4. The examination of the several detached reefs and shoals which lie to the southward of the Great Barrier, in the direction of Howe's Island.
5. The exploration and charting of the several reefs to the westward of New Caledonia.
6. The reefs, islands, and passages in the mouth of Torres Straits, which having been discovered and laid down by different authorities, assume a complicated appearance on the chart, are to be carefully laid down, in order that the best channel may be selected for the safe navigation of the strait.
7. The complete survey of Endeavour Strait, with its tides and sounds. The south coast of New Guinea, the islands of Louisiade and New Caledonia, and the coast in the neighbourhood of Whitsunday Passage, in lat. 20°, will also be visited in the course of the expedition.

We are informed, from a letter received from the gallant Captain, dated on board his sloop, Cape Upstart, April 23rd, 1843, that a considerable portion of the Barrier Reef has been surveyed, as well as some groups of islands which had been imperfectly seen by Captains Flinders and King. A wide passage to sea, abreast and to the N.E. of Cape Capricorn, had been discovered. The Barrier Reef was found to commence in lat. 22° 14′ S. and long. 152° 50′ E. and to extend in a northerly direction to lat. 21° 5′.

The shore of Republic Bay had been surveyed without finding any river; and preparations were being made for continuing the survey of the outer Barrier. The vessels had a short refit at Port Bowen, were victualled for seven months, and the crew were comparatively healthy.—*Times.*

Piracy.—The *Penang Gazette* of Sept. 23rd, reports a daring attempt of 14 Malay convicts, under sentence of transportation on the Harriet Scott, to take that vessel. Early in the morning, while the watch were shortening sail, in a squall, the party armed themselves with capstan bars, crow bars, pump spears, &c., and rushed on the quarter-deck. The captain was knocked down and killed, and the chief mate and others of the crew injured, and the convicts had possession of the deck for five hours; but the crew firing on them from the cabin, killed one, and mortally wounded three others, and the rest finding it impossible to continue in the ship, lowered the quarter boat and escaped. Next afternoon, they were picked up by a vessel bound to Calcutta, to whom the villains reported themselves as a shipwrecked crew, but the name of the ship and captain on the stern of the boat discovered to an intelligent native passenger who the parties were, and they were secured, and conveyed to Singapore.

The late Memnon.—The larboard paddle wheel and boat covering remain entire. About 3000 letters have been recovered.

Anchorage dues.—While those at Yarmouth are taken off, an action has been entered to exact those of Cork, one penny per ton.

Stations of H.M. Ships in Commission.

Acheron, 2, st. v., Lieut.-com. B. Alpin, Mediterranean.
Adder, 1, st. v., Mast.-com. J. Hammond, (act.), Pembroke.
Advice, 1, st. v., Lieut.-com. C. A. Petch, Pembroke.
Ætna, 8, Lieut.-com. C. G. Butler, Liverpool.
African, st. v., Master.-com. J. King, (acting) Sheerness.
Agincourt, 72, Rear-Adm. Sir T. J. Cochrane, Kt., Capt. H. W. Bruce, East Indies.
Aigle, 24, Capt. H. R. Henry, (acting), Mediterranean.
Alban, 1, st. v., Lieut.-com. ——— Woolwich.
Albatross, 16, Com. R. York, Vera Cruz, Sept. 25.
Albert, st. v., Lieut.-com. D. Woodruffe, Coast of Africa.
Albion, 90, Adm. Sir D. Milne, G.C.B., Capt. N. Lockyer, C.B., Plymouth.
Alecto, st. v. Lieut.-com. W. Hoseason, Mediterranean.
Alert, 6, Com. C. J. Bosanquet, Devonport.
Alfred, 50, Commodore J. B. Purvis, Brazils.
Alligator, 26, Master.-com. R. Brown, East Indies.
Apollo, tr. s. Com. W. Maclean Devonport.
Ardent, st. v. Com. J. Russell (*b*) South America.
Ariel, st. v. Master-com. L. Smithitt, (acting), part. ser.
Arrow, 6, schooner, Lieut.-com. W. Robinson, Cape of Good Hope.
Asp, 1, st. v. Lieut.-com. W. W. Oke, Portpatrick.
Avon, st. v. Lieut.-com. D. R. B. Mapleton, Woolwich.
Basilisk, 6, Lieut. H. S. Hunt, South America.
Beacon, 6, sur. v. Com. T. Graves, Mediterranean.
Beagle, 10, sur. v. Com. J. L. Stokes, (act.) Woolwich.
Beaver, st. v. Lieut.-com. R. Mudge, Dover.
Belvidera, 38, Capt. Hon. F. W. Austin, Gibraltar, Jan. 6.
Bittern, 16, Com. M. C. Aldham, (acting) Cape of Good Hope.
Black Eagle, st. v. Master-com. S. B. Cook, (act.) part. serv.
Blazer, 3, st. v. Capt. J. Washington, Surveying North Sea.
Bonetta, 3, Lieut.-com. E. E. Gray, Sheerness, Jan. 6 from Ascension.
Bramble, 10, Lieut.-com. C. B. Yule, East Indies.
Caledonia, 120, Rear-Admiral W. Bowles, C.B., Capt. Alex. Milne Ireland.
Cambrian, 36, Capt. H. D. Chads, C.B., East Indies.
Cameleon, 10, Lieut.-com. G. M. Hunter, Woolwich.
Camperdown, 104, Vice-Admiral Sir E. Brace, K.C.B. K.C.H., Capt. F. Brace, Sheeerness.
Carysfort. 26, Capt. Lord Paulet, Brazils.
Castor, 36, Capt. C. Graham, Simons Bay, Oct. 21.
Ceylon, 2, receiving-ship, Lieut. R. Curtis, flag lieutenant, Malta.
Champion, 18, sloop, Com. J. Clavill, South America.
Charon, 1, st. v. 2nd Master, E. C. Rutter, Dover.
Childers, 16, sloop, Com. G. G. Wellesley, East Indies.
Cleopatra, 26, Capt. C. Wyvill, Cape of Good Hope.
Clio, 16, brig, Com. S. G. Freemantle, Portsmouth, Dec. 21 from E. Indies.
Cockatrice, 6, Lieut.-com. J. Oxenham, South America.
Columbia, st. v. Lieut.-com: J. Harding, North America.
Comet, 2, st. v. Com. G. A. Fraser, part serv., Ireland.
Confiance, 2, st. v. Second-master J. Jagoe, (act) Devonport.
Conway, 26, Capt. R. Fair, K.H., South America.
Cormorant, 6. st. v. Com. G. T. Gordon, South America.
Cornwallis, 72, Vice Adm. Sir W. Parker, K.C.B., Capt. P. Richards, East Indies.
Crescent. 42, receiving-ship, Lieut.-com. M. Donellan, Rio Janeiro.
Cuckoo, st. v. Lieut.-com. A. Parks, Weymouth.
Curacoa, 24, Capt. Sir T. S. Pasley, Bart., Brazils.

Curlew, 10, Lieut.-com T. C. Sprigg, Rio, Nov. 24.
Cyclops, 6, st. v. Capt. W. F. Lapidge, Ireland.
Daphne, 18, Capt. J. J. Onslow, South America.
Dasher, st. v. Mas.-com. R. White, Weymouth.
Dee, st. v. 2, Mas.-com. T. Driver, Ireland.
Devastation, 6, st. v, Com. Hon. S. T. Carnegie, Mediterranean.
Dido, 18, Capt. Hon. H. Keppel, East Indies.
Dolphin, 3, Lieut.-com. W. O'B. Hoare, Rio, Nov. 24.
Doterel, st. v. Mas.-com. J. Grey, Holyhead.
Dover, st. v. Master E. Lyne, Dover.
Driver, 6, st. v. Com. C. O. Hayes, East Indies.
Dublin, 50, Rear-Adm. R. Thomas, Capt. J. J. Tucker, South America.
Dwarf, st. v. Lieut.-com. E. Nicolls, Woolwich.
Electra, 18, Com. A. Darley, West Indies.
Emerald, tender to Albert and Victoria, Second-master G. Allen, Portsmouth.
Espoir, 10, Com. A. Morrel, Coast of Africa.
Eurydice, 26, G. A. Elliot, part. service.
Excellent, Capt. Sir T. Hastings, Knt. Portsmouth.
Fair Rosamond, 2, Lieut. Lieut.-com. A. G. Bulman, North America.
Fearless, st. v. Com. W. L. Sheringham, Portsmouth Surveying.
Ferret, 6, Com J. Oake, Coast of Africa.
Fisguard, 42, Capt. J. A. Duntze, South America.
Flamer, Lieut.-com. C. J. Postle part. service.
Fly, 18, Capt. F. P. Blackwood, East Indies.
Formidable, 84, Capt. Sir C. Sullivan, Bart. part. service.
Fox, 42, Capt. Sir H. M. Blackwood, Bart., Guard ship at Tarbert.
Frolic, 16, Com. W. A. Willis, South America.
Geyser, st. v. Com. E. I. Carpenter, Gibraltar, Jan. 6.
Gleaner, 2, st. v. Com. C. G. Robinson, Bermuda.
Gorgon, 6, st. v. Capt. C. Hotham, South America.
Griffon, 3, Lieut.-com. C. Jenkin, North America.
Growler, 6, st. v. Com. C. H. M. Buckle, Rio. Nov. 24.
Harlequin, 16, Com. the Hon. G. F. Hastings, East Indies.
Hazard, 18, Com. C. Bell, East Indies.
Hecate 4, st. v. Com. P. Bower, Woolwich.
Hecla, st. v. Com. J. Duffil, Mediterranean.
Helena, 16, Com. Sir T. Ricketts, Plymouth.
Hermes, 2, st. v. Lieut.-com. W. Carr, West Indies.
Heroine, 6, Lieut.-com. H. R. Foote, Coast of Africa.
Hornet, 6, Lieut.-com. R. B. Miller, West Indies.
Hyacinth, 18, Com. F. Scott, Plymouth.
Hydra, 4, Com. H. B. Young, Coast of Africa.
Illustrious, 72, Vice-Adm. Sir C. Adam, K.C.B., Capt. J. E. Erskine, sailed from Halifax for Bermuda, Nov. 23.
Imaum, receiving-ship, Commodore A. R. Sharpe, C.B, Jamaica.
Inconstant, 36, Capt. C. H. Freemantle, part. service.
Indus 78, Capt. Sir James Stirling, Kt., Malta.
Iris, 26, Capt. G. R. Mundy, Ireland.
Isis, 44, Capt. Sir J. Marshall, Kt., K.C.H., Cape.
Jasper st. v. Master-com. E. Rose, Pembroke.
Kite, 2, st. v. Lieut.-com. W. M. J. G. Pasco, Woolwich.
Lark, sur. vessel, Lieut.-com. G. B. Lawrence, West Indies.
Larne, 20, Com. J. W. D. Brisbane, Portsmouth, Jan. 9.
Lightning, 2, st. v. Lieut.-com. W. Winniett, part. service
Lily, 16, Com. G. Baker, Portsmouth, Jan. 2, Paid off.
Locust, 3, st. v. Lieut.-com. J. Lunn, Gibraltar, Jan. 6.
Lynx, 3, Lieut.-com. G. J. T. Nott, Ireland.
Madagascar, 44, Capt. J. Foote, Coast of Africa.

Magpie, 4, cutter, Com. T. S. Brock, Mediterranean.
Malabar, 74, Capt. Sir G. Sartorius, Knt, Gibraltar.
Mastiff, 2, sur.-vessel, Master-com. G. Thomas, Woolwich, Surveying service.
Meander, 44, Capt. Right. Hon. Lord Ingestrie, Chatham.
Medea, 4, st. v. Com. F. Warden, Mediterranean.
Medina, 2, st. v. Master-com. W. Smithett, (act.) Liverpool.
Medusa, 2, st. v. Lieut.-com. J. P. Philips, Liverpool.
Mercury, tender, Second Master, J. Scarlett, Portsmouth.
Merlin, 2, Lieut.-com. E. Keane, Liverpool.
Meteor, 2, st. v. Lieut. com. G. Buttler, Ireland.
Minden, 20, hospital-ship, Capt. M. Quin, East Indies.
Modeste, 18, Com. T. Baillie, South Amerfca.
Monarch, 84, Capt. S. Chambers, Sheerness.
Monkey, 1, st. v. Second-master, W. Bryant, (act.) part. service.
Nautilus, 10, Lieut.-com. W. Tringham, part. service.
Nereus, store-ship, Master-com. F. W. Bateman, Devonport.
Nimrod, 20, Com. F. H. H. Glasse, East Indies.
North Star, 26, Capt. Sir J, E. Home, Bart., Sydney, 17.
Ocean, 80, Capt. Sup. P. Fisher, Sheerness.
Orestes, 18, Com. E. St. Ledger Cannon, Mediterranean.
Otter, st. v. Lieut.-com. H. P. Jones, Holyhead.
Pantaloon, 10, Lieut.-com. C. H. Lapidge, Coast of Africa.
Pearl, 20, Com. R. H. Stopford, South America.
Pelican, 16, Com. P. Justice, East Indies.
Penelope, 24, st. v. Capt. W. Jones, Portsmouth.
Perseus, rec. sh., Lieut.-com. W. Greet, Tower.
Philomel, 6, Com. B. J. Sullivan, Falkland Islands.
Pickle, 2, Lieut.-com. J. A. Bainbridge, West Indies.
Pigmy, 1, st. v. Lieut.-com. C. Autridge, Pembroke.
Pike, 1, st. v. Lieut.-com. A. Boyter, Port Patrick.
Pilot, 16, Com. W. H. Jervis, part. ser.
Pique, 36, Capt. the Hon. M. Stopford, Demerara, Oc. 26.
Plover, sur. v., Capt. R. Collinson, C.B., East Indies.
Pluto, 2, Lieut.-com. J. Jeayes, Ireland.
Poictiers, 72, Capt. Sup. W. H. Shirreff, Chatham.
Polyphemus, 1, st. v., Lieut.-com. T. Spark, part. ser.
Prospero, 1, st. v. reserve packet, Pembroke.
Pylades, 18, Com. L. S. Tindal, Sheerness.
Queen, 110, Vice-Admiral Sir E. W. C. R. Owen, K.C.B., G.C.H., Capt. G. F. Rich, Mediterranean.
Racer, 16, Com. A. Reed, part. ser.
Rapid, 10, Lieut.-com. E. C. Earle, Coast of Africa.
Rattlesnake, troop ship, Master-com. J. Sprent, East Indies.
Raven, 4, Lieut.-com. J. W. L. Shiels, Sheerness.
Redwing, st. v. Com. T. Bevis, Liverpool.
Resistance, 42, trp. s. Com. C. G. E. Patey, left Barbados for England, Nov. 16.
Rhadamanthus, 2, st. Master-com. Laen, part. ser.
Ringdove, 16, Com. Sir W. Daniell, Kt., North America.
Romney, depôt, Lieut.-com. R. M'Clure, Havana.
Rose, 18, Com. H. R. Sturt, North America.
Royal Sovereign, Capt. Sup. Sir W. Pell, Pembroke.
Royalist, Lieut.-com. P. Chetwode, East Indies.
Salamander, 4, st. v. Com. A. S. Hamond, South America.
Samarang, 26, Capt. Sir E. Belcher, C.B., East Indies, Surveying China Sea.
San Josef, 110, Rear-Admiral Sir S. Pym, K.C.B., Capt. F. W. Burgoyne, Plymouth.
Sapphire, tr. sh. Master-com. J. R. Fittock, East Indies.
Sappho, 16, Com. Hon. G. Hope, Cape of Good Hope.

Savage, 10, Lieut.-com. J. H. Bowker, Mediterranean.
Satellite, 18, Com. R. H. B. Rowley, Portsmouth.
Scout, 18, Com. Hon. J. R. Drummond, Mediterranean.
Scylla, 16, Com. R. Sharpe, part. ser.
Seaflower, 6, cutter, Com. N. Robilliard, Portsmouth.
Sealark, 18, Com. T. L. Gooch, Coast of Africa.
Serpent, 16, Com. W. Nevill, East Indies.
Shearwater, 2, st. v. Com. C. G. Robinson, surveying.
Siren, 16, Com. W. Smith, (*b*) East Indies.
Skylark, 4, Lieut.-com. G. Morris, part. ser.
Snake, 16, Com. Hon. W. B. Devereux, Mediterranean.
Snipe, 2, Lieut.-com. G. Raymond, Ireland.
Spartan, 26, Capt. Hon. C. G. J. B. Elliot, Bermuda.
Speedy, 2, Lieut.-com, G. Beaufoy, part. ser.
Spider, 6, Lieut.-com. J. O' Reilly, Rio, Nov. 24.
Spiteful, st. v., 6, Com. W. Maitland, Singapore, Aug. 25.
Sprightly, 1, st. v. Master-com. J. P. Moon, (act.) Holyhead.
Spy, 3, Lieut.-com. T. O. Wooldridge, Coast of Africa.
St. Vincent, 120, Admiral Sir C. Rowley, Bart., GCB., GCH., Capt. R. F. Rowley, Portsmouth.
Star, 10, Com. R. J. W. Dunlop, Coast of Africa.
Starling, cutter, Capt. H. Kellett, C.B., East Indies.
Stromboli, 6, Com. the Hon. E. Plunkett, Ireland.
Styx, 6, st. v. Capt. A. T. E. Vidal, Woolwich.
Swallow, 1, st. v. Master-com. R. Sherlock, (act.) Dover.
Sylph, 2, tender to *Caledonia*, Admiral Sir D. Milne, GCB., Devonport.
Sylvia, 6, Lieut. E. E. Turnour, tender to *Seaflower*.
Talbot, 26, Capt. Sir T. Thompson, South America.
Tartarus, st. v. Com. J. Wolfe, part. ser.
Thalia, 42, Capt. C. Hope, East Indies.
Thunder, 6, surv. v., Com. E. Barnett, West Indies.
Thunderbolt, 6, st. v. Com. G. N. Broke, Cape of Good Hope.
Tyne, 26, Capt. W. N. Glascock, Mediterranean.
Urgent, 2, st. v. Master-com. J. Emerson, part. ser.
Vernon, 50, Capt. W. Walpole, Mediterranean.
Vestal, 26, Capt. C, Talbot, Plymouth.
Vesuvius, 6, st. v. Com. E. Ommaney, Mediterranean.
Victoria and Albert, yacht, Capt. Lord A. A. Fitzclarence, Portsmouth.
Victory, 104, Capt. Henderson, CB., KH., Portsmouth.
Vindictive, 50, Capt. Nicolas, CB-, KH., part. ser.
Viper, 6, Lieut.-com. J. Carter, South America.
Virago, 6, st. v. Com. G. G. Otway, Mediterranean.
Vixen, 6, st. v. Com. G. Giffard, East Indies.
Volage, 26, Capt. Sir W. Dickson, Bart., Plymouth.
Volcano, 2, st. v. Lieut.-com. Featherstone, Ireland.
Wanderer, 16, Com. G. H. Seymour, East Indies.
Warspite, 50, Capt. W. P. Wallis, Lisbon, Jan. 9.
Wasp, 16, Com. A. Drew, Oct. 16, sailed from Barbados for Antigua.
Widgeon, 1, st. v. Lieut.-com. T. S. Scriven, Dover.
Wilberforce, st. v. Lieut.-com. R. S. Moore, Coast of Africa.
Wildfire, 1, st. v. Lieut.-com. A. Darby, Weymouth.
William and Mary, yacht, Capt. Sir F. A. Collier, Knt., CB., KCH., Woolwich.
Winchester, 52, Rear-Adm. Hon. J. Percy, Capt. C. Eden, Cape of Good Hope.
Wolf, 18, Com. C. O. Hayes, East Indies.
Wolverine, 16, Com. J. S. W. Johnson, East Indies.
Zephyr, 1, st. v. Lieut.-com. J. Small, Holyhead.

Voyage of H.M.S. Cornwallis.

Canto the Fourth.

Enter the Yang-tze-Kiang.—The Fight at Woosung, June 16th, 1842.

I left off at Chapoo—events are now thickening,
The Chinese have just had another good sickening;
But before I describe the late Woosung affair
Let us take a look back to our last action; where
Having burnt all the junks, arms, stores, and so forth;
We left all the ships setting sail for the North.
We reached some small islands called "Rugged" next day,
Then off started Kellett to find out the way
To the Yang-tze-Kiang river,—and very soon found
That Cornwallis *might* enter without taking ground.
In spite then of fogs, tide, currents, and calm,
We reached "Amherst rocks" without coming to harm.
Ariadne while sounding here felt a great shock,
And found that her bottom had stuck on a rock,
Which forced its way through and left a large hole,
In which flowed much water on engines and coal.
She nearly went down; and t'was found the best plan
That Sesostris should take her in tow to Chusan;
Where she left her quite safely hauled up on the shore,
But one night she slipped off, and was never seen more!
Small ships to the number of six thereabout,
Were made use of as buoys, to mark out the route.
Modeste with two steamers was sent to Woosung,
While a nasty thick fog for some days round us hung,
Which prevented our sailing so soon as intended;
But we all made a start whenever it mended,
With a fine breeze right aft, and tide in our favour,
And ran up in one day without very much labour.
Kellet took the Cornwallis, and Collinson—Blonde,
And right well they had worked as the Admiral owned.
For some miles our "big ship" had just three feet to spare,
But we well knew our men so did not despair.
Our Siamese twins* always working together
Having marked out the channel in spite of the weather.
As we sailed the South bank very soon came in sight,
And a few hours after, the North bank on our right:
Both low and well wooded, while the rich cultivation
That appeared as we passed; shewed the wealth of the nation.
We lay anchored three days to prepare for the fight,
As the surveyors sounded and buoyed in the night
The mouth of the river Woosung, at the spot
Where it joins the Great river, close to where we had got.
For a length of three miles on the right as you enter,
Was a long line of guns, with a fort in the centre.
At one end of this line was a creek well defended
By a fort of ten guns, on which Woosung depended;
At t'other end of the line where it joined the Yang-tze
Was the town Paou-shan hidden under its lee;
On the opposite side of this line of defence,
Was another fort,—shewing they spared no expense
To make it impregnable; yet in two hours
From the time the ships anchored, the whole place was ours.

* Them Siam youths so neatly glued together,
What keeps each other warm in frosty weather.—Song.

Each ship had a steamer fast to her at dawn,
And were all under way at six in the morn.
The Blonde with Tenasserim lashed to her leading,
Followed close by the "Flag" with Sesostris;—not heeding
The volley which opened as soon as we closed;
Not a shot was returned till our ship was opposed
To the double banked fort—then with anchors astern,
We opened our fire from both sides in return.
Modeste with the Nemesis passed us quite close,
The Columbine followed, to give them a dose,
By the Phlegethon towed; and by way of a freak
Modeste shoved her nose right into the creek.
Clio towed by the Pluto, and small Algerine,
Anchored somewhere about us:—and now there was seen
A sight for which every true Englishman longs,
A capital instance of "hammer and tongs."
All the steamers cast off having towed us in well,
And commenced on the larboard hand forts to throw shell.
The first shot that was fired on Blonde as she led,
Wounded two or three men and took off Hewitt's head.
And two shots while our chief on the poop was commanding
Struck the mizen mast just above where he was standing.
At the end of the fight, we saw not very far
A ship coming in which we found was North Star;
She passed on ahead, and partook in the fun
Just in time, for the China-men soon "cut and run."
From the mast head we saw parties running pele mele,
So we sent in among them some well pointed shell.
Then into the boats as fast as we could,
And soon our marines on the "long battery stood."
Notwithstanding that some of the steamers had stranded,
In a very short time the troops were all landed,
And marched to the little walled town Paou-shan;
But the Chinese as soon as they saw them all ran.
It is worthy of notice in this late transaction,
T'is the first time that steam has towed ships into action.
It certainly has been a glorious lark!
The country around us is just like a park,
So rich and so fertile, such fine clumps of trees,
The green bamboos waving to and fro in the breeze.
A party of sailors were now well employed,
In burning the tents, which were soon all destroyed;
These tents were in rows, in the rear of the guns,
Which were found of all sizes,—some weighing three tons.
The copper ones all were embarked and we tried,
To destroy all the rest, and nearly got fried;
For just at this time the sun's heat was intense,
And the work that was gone through was really immense.
However by dint of the greatest exertion,
They all were got off, and then some diversion
Was caused by exploding the powder we found,
In the numberless houses, well filled all around.
The fort was encased (not less curious than true)
In a species of hurdling made of bamboo.
Loose stones being thrown between it and the wall,
Our shot often stuck without splintering at all.
The batteries were terribly battered about,
Which must have "astonished the natives" no doubt.
To conclude this epistle, I'm sorry to say,
The beautiful Dido arrived the same day
That the action was fought,—but her luck did not serve,
To reach us in time though she strained every nerve.

H.M.S. Cornwallis, Woosung, 20th June, 1842.

Decisions in the Admiralty Court.

Hull brig *v.* London Packet schooner.

Rye, Jan. 5, 1844.

Sir.—A case of collision was tried in the Admiralty Court, on the 12th Dec. last, and full particulars were given in the *Shipping and Mercantile Gazette* of the 13th, between the schooner London-packet and the brig Hull. Blame was imputed to the London-packet for putting the helm to port, she sailing on the larboard-tack with the wind abeam. Now, sir, I am going to state facts, so that any nautical man may judge for himself whether I acted contrary to the rules laid down by the Trinity-house. The schooner was crossing the Tees on the 1st of June last, bound to Sunderland, steering a course N.N.W. ½ W., with the wind from the westward, as near on our beam as it could possibly blow, going about four knots per hour. About half-past eleven p.m. saw a brig about one point on our larboard bow, coming to the southward. I ordered the helm of the schooner to be put to *port*, and to keep away two points, which I thought quite sufficient, it being a fine night. As the vessels neared each other, I perceived the brig had put her helm to *starboard*, and was *keeping away also.* I immediately ordered my helm to be put hard to port, and called to the brig to port her helm—but no notice was taken of it. Her helm was kept hard to starboard, and she came stem on into the schooner.

The Trinity rules expressly say, when vessels meet each other with the wind abeam, both shall port their helms, and pass each other on the larboard side. Now, I ask, did I deviate from the Trinity rules in this case, by putting my helm to port? Did the brig act according to the rules in putting her helm to starboard? The Trinity Masters say I ought not to have gone to leeward of the brig, but that I should have passed to windward of her. Now, if they decide that you are sometimes to put your helm to port, and sometimes to starboard, I will defy masters of vessels to know what to do, and the Trinity rule itself will become as a dead letter. The rules are excellent, if attended to; and if all parties were to observe them, many accidents would be prevented. No one ever paid stricter attention than I have done to the rules, but I shall have little confidence in doing so for the future. The brig stated that she lay unmanageable. Now, whether she was becalmed before I saw her I will not pretend to say, but when she came into the schooner she was not going less than three knots an hour, and the wind was, at least, two points abaft her beam.

The Trinity Masters say if the schooner had continued her course N.N.W. she would have passed to windward of the brig. How—which way? I ask any nautical man if a vessel bears N.W. ½ N. of you, and you steer N.N.W., whether *you will go to windward* of that vessel, with *the wind from the westward?* Such nautical knowledge I am not acquainted with. Had the observation been made by two captains of the army I should not have been so much surprised.

I am, sir, your obliged and obedient servant,

Stephen Britt,

Master of the schooner London Packet.

This was another case of collision, the question depending also upon points of nautical science, and which was heard before the same Trinity Masters. The brig Hull, of 116 tons, laden with coals, proceeding from the north to London, and the schooner London packet, of 94 tons, in ballast trim, from Rye to Sunderland, came in collision at the mouth of the Tees, on the night of the first of June. Each party, in this case, charged the other with being the cause

of the collision; but the London Packet having sustained slight damage (that of the Hull being considerable,) her owners had not instituted a cross action.

Dr. Addams and Dr. Robertson were heard for the Hull, and Dr. Haggard and Dr. Twiss for the London Packet.

The Court, addressing the Trinity Masters said.—In this case the collision took place on the 1st of June, and it was admitted on both sides that it was not a case of inevitable accident, and must have occurred in consequence of blame attributable to one or the other of these two vessels. The statement on behalf of the vessel proceeding, viz., the Hull, is to the following effect:—She had quitted the port of Middlesborough for the purpose of sailing to London. It appears that after having cast off the steam-tug by which she had been conducted out of that port, the wind was directly contrary to the course she was intending to pursue. She states that in consequence of the head wind she stood to the N., on the starboard tack, and continued on such tack till noon, when she was tacked to the S., on the larboard tack, on which tack she continued until 4 P.M., when she was again tacked to the N. and E., on the starboard tack, and continued on such tack until half-past 7 P.M., when the wind gradually died away, so that at half-past 8 o'clock P.M. the brig became totally becalmed. The representation is, that during the whole of this day the wind did not blow from such a quarter as to enable the master to make any progress towards the completion of the voyage.

He states, "That at such time it was ebb tide, and that in consequence of the swell of the sea, the brig was thrown athwart the tide, with her head to the N. and E., her helm being lashed, in which condition she continued until 10 o'clock P.M., when a light air having sprung up from the S., her yards were braced sharp up, on the starboard tack, her helm was put hard to starboard and her head brought up to the wind—namely S.E." Now, as I understand it, the vessel, until a very short period, at least prior to the time of this collision, lay with her head to the S.E., but notwithstanding which, he says, the brig, for want of sufficient wind, was still unmanageable. At half-past 11 o'clock, the schooner, the vessel proceeded against, bound for Sunderland, was seen by the watch on deck, about a quarter of a mile off, coming down upon her with all sail set from the S., and bringing with her a breeze from the S.S.W. Now, gentlemen, I wish particularly to call your attention to this statement; you will be able to judge whether it is true in point of fact, and whether the measures adopted were the correct ones, either by the one vessel or the other. But the statement here is, that the head of the brig was to the S.E.; and, being in this predicament, a vessel came down on her with all her sails set, with a breeze from the S.S.W. Then he states that the breeze had not reached him at the period of the collision; and, in point of fact, he was at that time in an unmanageable state, so that he could do nothing. On the other hand, the statement is that the schooner was proceeding to the N.

About half-past eleven P.M. she was crossing the mouth of the Tees, with the wind moderate from the S.W. and by W., with all sails set except the studding-sails, and her course appears to have been N.N.W. ½ W., therefore she had the advantage of the wind in her favour. She says that so proceeding she descried the brig, for it is not pretended that this was a dark night, on which the vessels could not see each other; on the contrary, the evidence distinctly shows that there was a capability of seeing at some distance. The helm of the brig was put to starboard, in order to prevent the accident that it was thought would take place. The helm of the schooner was put to port, and though the master hailed those on board the brig to put her helm a-port, she continued to bear down upon the schooner, and came stem on to the bow of the schooner. A great deal has been said upon the rule laid down by the gentlemen of the Trinity-house respecting two vessels, and that rule has been recognised over and over again, and I hope never will be departed from in any case where it applies. I apprehend the rule to be this, that where one vessel is upon the

starboard tack, and the other on the larboard tack, it ought to be the custom of the former to keep her wind, and of the latter to give way. But what does this presume? It presumes that the heads of the two vessels are opposing each other—it is not intended to apply if they are lying in different directions. You never intended to lay down the rule universally. But if you believe the brig was lying with her head to the S.E., then in point of fact the two vessels were not approaching together according to the statement made on behalf of the London Packet. It is, therefore, a very different consideration under circumstances of that description, whether she ought to have ported her helm or not; and it will be very important to consider whether the brig could do anything to avoid the accident. In short, in one word, I request you to state your opinion to me as to which of the two vessels was to blame on that occasion.

Captain Weller.—The London Packet had a fair wind abaft the beam, and commanded steerage way. Had she continued her course N.N.W. she would have passed away to the windward of the brig—that is astern. We, therefore, consider, that the collision was occasioned by the act of the schooner attempting to cross the brig.

The Court.—In that case I pronounce for the damage.

Mr. Editor.—It is said "*Examples teach when precepts fail.*" Seamen are greatly indebted to you for teaching them many useful things in their way. I send you the accompanying for your valuable periodical, which I hope will enlighten your readers in my way. Trusting you will give it immediate publication, I have the honour to be, with great respect,

Your obedient servant.

Sam. Seaward.

New Problems in Navigation for 1844.

Conditions:—A brig bound from north to south, and a schooner from south to north, meet four or five miles from the land on the east coast of England.

Problem 1. *Given*,—brig's head to northward and eastward becalmed. A breeze comes from S.W., her yards are braced up on the starboard tack, and helm put to starboard; *required*, to prove that she will come to the wind on the starboard tack with head S.E.

Problem 2. *Given*,—brig by the wind heading S.E.; *required* to prove she was unmanageable.

Shew off hand if you like, that a vessel can cross the mouth of any river when she is four or five miles outside of it.

Problem 3. *Given*,—wind S.W., or W.S.W., brig's course S.E., (easterly to clear the land) schooner's course N.N.W.; *required* to prove that the latter had advantage of the wind over the former.

Problem 4. *Given*,—brig as above, head S.E., wind S.W.,—schooner seen ahead steering N.N.W. By the laws of meeting at sea, which enact as follows;—For sailing vessels when both are going by the wind, the vessel on the *starboard tack shall keep her wind*, and the one on the *larboard tack bear up*, thereby passing each other on the larboard hand;

When *both vessels* have the wind *large or abeam* and meet, they shall pass each other in the same way on the larboard hand, to effect which two last mentioned objects, the *helm must be put to port*;—

Shew that the brig did right by putting her helm to starboard, and the schooner did wrong by porting her helm in compliance with the above law.

Problem 5. Shew by the mariners' compass and adapt your reasoning to "the meanest capacity," that a vessel steering N.N.W., and another steering S.E., are not going nearly in the opposite directions, nor approaching (when first seeing) each other.

Problem 6. *Given*,—the brig with helm to starboard running her bowsprit between the weather leech of the schooner's square foresail and her fore rigging, the jib-boom

extending to schooner's lee rigging, carrying away these, smashes her own stem and bows against the schooner's larboard bow. Prove that she had no *way on her* to do this, and that it could have been done by the schooner putting her helm to *port*, if the brig had been even becalmed.

Problem 7. Take any common mariners' compass and demonstrate the following by the rules of Navigation: when any schooner with the wind at W.S.W., or S.W. steering N.N.W., sees a brig bearing N.W.$\frac{1}{2}$W., of her, and standing S.E.; that by keeping on her course she will pass to windward or to the westward of the brig; or to save trouble briefly shew that the point N.N.W., is nearer to the west point of the compass than N.W.

N.B.—No other than the mariners' compass must be used, and there must be no come off about mistaking the lubber's point for the lubber's mark. You may also show by the same rules (if you can) that the schooner having a fair wind with steerage way, the wind could not possibly be fair for the brig steering S.E.

A complete solution of the foregoing problems will no doubt demonstrate to the satisfaction of one of the above parties concerned, the very great advantage of *knowing* the Trinity House regulations concerning vessels meeting at sea.

New Books.

Pilote Français; Instructions Nautiques, &c.—*Sailing Directions for the Coast of France, between Point Barfleur and Dunkirk.*—By M. Givry, in 4to.—Paris, 1842.

The sixth and last part of that splendid national work the "Pilote Français," comprising charts and plans of the whole of the northern and western coasts of France, in six volumes, folio, being complete it became necessary that it should be accompanied by sailing directions. The compiling such a work was entrusted to M. Givry, one of the corps of the Ingénieurs-Hydrographes and the quarto volume before us describing the coast from Barfleur to Dunkirk, is the first-fruits of that officer's labours.

The northern coast of France between these points is divided by the Capes d'Antifer and Grisnez into three natural divisions, and M. Givry in treating of them has accordingly divided his work into three parts. The first of these from Point Barfleur on the west to Cape d'Antifer on the east, relates to what may be termed the bay of the Seine, one of the largest in the Channel; it extends in an east and west direction fifty-six miles, has a circuit of ninety-six miles, and a depth of twenty-four miles towards the embouchure of the river Orne. All the harbours in this bay are dry harbours, and not accessible to a large ship. Point Barfleur is low, and a rocky reef extends one mile off shore, over which the tides form the well-known Barfleur Race. A revolving light 222 French feet above the sea, and visible twenty-two miles, warns the mariner to avoid this dangerous point. Comprised in the bay of the Seine, the chief ports are Barfleur, La Hogue, Caen, Honfleur, and Havre, all of which are well described in this work, as also the small Port-en-Bessin, lying in the bight of the bay, which would be valuable if formed into a harbour of refuge.

The second natural division of this part of the coast is comprised between the Capes d'Antifer and Grisnez, a circuit of 106 miles, including the ports of Fécamp with its new light;* St. Valery, noted for its remarkable eddy tide, called the *Sciade*, not unlike the *Verhaule* at Havre; Dieppe, Tréport, Abbeville, Etaples, and Boulogne; it also comprises that disastrous space between the rivers Somme and Cauche, the scene of so many shipwrecks, and recently of

* Surely this light would have been better placed on Cape d'Antifer, which would have made it available for the approach to Havre, as well as Fecamp, and not on a hill at the edge of a well watered valley, exposed to all the damp and mist so liable to obscure it.

those of the *Conqueror* and *Reliance*. M. Givry devotes a chapter to the causes of these shipwrecks, and the means of their prevention; yet he can propose nothing but "lead and look-out," as the only real safeguard. Here too is a description of the well-known shoals the Ridge or Colbart, and the Varne or Rouge Banc, but we gather nothing new from it.

The third division extends from Cape Grisnez to the frontier of Belgium, a distance of thirty-nine miles, and includes the tidal harbours of Calais, Gravelines, and Dunkirk. From Cape Grisnez to Blancnez the land is high, and visible for twenty miles, thence eastward it is low, and numerous sandbanks line the coast. It is well lighted by the revolving lights of Grisnez and Calais, and the two new and splendid lights of Gravelines and Dunkirk.

The chief interest, in our opinion, in this third division of the *Instructions*, consists in the description of the sandbanks, which skirt the coast, and extend for some distance into the North Sea, diverging from the Straits of Dover, as from a centre. These banks were originally surveyed by M. Beautemps Beaupré in 1802, and the examination in 1836, has shewn the accuracy of that veteran and excellent hydrographer's work, and proved that their outlines do not change; the buoys, however, are liable to drive from their positions, but no thwart marks are given to enable us to know their proper places, indeed, on this flat coast it would be necessary to erect beacons to mark their sites; we may remark *en passant*, that the white buoy No. 1, at the western entrance of Dunkirk Roads is not placed in the chart.

After desribing the banks near the coast, including the Sandettié (in Flemish Zand-detié, or Little Sand,) the "Ourting" of the Calais pilots, M. Givry proceeds to give an account of the distant shoals for which he acknowledges himself indebted to Capt. Hewett's chart of the North Sea, sheet 1. We are surprised however, that he could mention the shoal named Thornton's Ridge, or Buyten or Witte Banck, without calling for a floating light to be placed on this very dangerous bank, which in one spot has only eleven feet water on it, and of which the lead, owing to the irregularity of the soundings, gives but little warning; we ourselves had occasion two years since to write to the Minister of Marine in Belgium, on this subject, but nothing has yet been done; if the commerce of Belgium does not need such a light, surely that of Holland does.

In speaking of the Leman and Ower Banks, it is not easy to understand what M. Givry means by saying "not being acquainted with the results of Captain Hewett's labours on these banks, we regret not to be able to give any account of them," &c. p. 428. What should prevent M. Givry being acquainted with a chart of these banks, published some fifteen years ago? And to which we may now add the position of the light-vessel, as recently determined by triangulation from Cromer and Hasborough, on the coast of Norfolk,

Lat. 53° 8′ 47″ N.
Long. 2 2 7 E. of Greenwich, or, 0° 18′ 18″ W. of Paris.

Although we cheerfully acknowledge the value of this work, and the mass of information it contains, we may be permitted to express our opinion that it would have been an improvement had the "Instructions" been divided into two parts, scientific and practical, in endeavouring to combine the two both seem to have suffered; thus we have a sprinkling of science in such terms as "the co-efficient of the tide," "l'unité de hauteur," "half amplitude of the tide," "quadrature," "syzygie," &c., which surely cannot be in common use, nor even understood by nine-tenths of the sailors for whom these "Instructions" should be intended; at the same time we miss the enlarged views that we were led to look for in such a work, touching upon the geological structure of the coast, and of the adjacent sandbanks; on the probabilities that certain capes or points might increase or be encroached upon by the sea; measurements of the heights of all the remarkable capes, &c., above the level of the sea; not one of which is given either in the charts, or, in the sailing directions; a discussion as to whether the mean tide level, or high water, or, low water, or any one of

them, may be considered the true level of the sea; the probable set of the tides that formed certain banks; the action of the tide in mid-channel as well as immediately at the entrance of the ports and along the coasts; and especially actual measurements of the vertical rise and fall of the water by a fixed tide pole, on some of the outlying banks, as our own experience on the Leman and Ower, and elsewhere, leads to the belief that little or no rise takes place while the flood stream is running in its strength, and if this law holds good on the banks off Dunkirk and Gravelines it might lead the mariner into a serious error.

We are tempted also to ask why the survey of the Coast was not carried further eastward; what signifies an arbitrary boundary between two countries to a sailor? there is no division between the dangerous banks that line these shores; and the entrances to Nieuport and Ostend roads may be of as much consequence to a French sailor in a gale of wind as the passage into his own more immediate ports of Gravelines and Dunkirk. When Great Britain is so liberally surveying the whole North Sea, for the general benefit of navigation, and we might add very many other parts of the world, we have some little right to complain when we see others nations stopping their surveys even in the middle of a sandbank (the Smal and Trapegeer banks for instance) because forsooth it is beyond the arbitrary limit of their territory! were it only for the credit of their veteran chief's *reconnoissance* of these shores in 1802, the actual survey should have been carried as far as the entrance of the Scheldt.

We are disposed to quarrel too with the paucity of the soundings in many of the charts of the *Pilote Francais:* compare for instance with Capt. Hewett's chart of the North Sea, sheet 1, the meagre tracks run off from Cape Grisnez to the Ridge or Colbart, and Varne; in some places, and even between these very dangerous banks, there are spaces upwards of two miles square, without a cast of the lead upon them! and why should deep water soundings be recorded in feet? Why should not all nations agree in the use of the fathom? Charts should speak a universal language; the fathom is a measure which all have,—the French have their *toise*, the Spaniards and Portuguese the *braza*, the Germans their *faden*, the Dutch *vadem*, the Danes and Norwegians the *favne*, and the Swedes the *famn*; all pretty nearly the same measure; then why puzzle ourselves with the French *pied*, or indeed *metre*; or the Dutch *palmen* of four inches, to measure the depth of the ocean!

Our last, and perhaps chief objection is to the use of *true* bearings, direction of currents, winds, &c., it is both unseamanlike and puzzling; all should be magnetic. What does the sturdy smuggler of Dunkirk who runs a cargo of brandy and silks to the Thames, or, the equally hardy collier from Newcastle, who carries a cargo of coals to Calais, know of the *true* meridian? and yet, it is for persons of this class for whom sailing directions must be drawn up, and for whom charts must and ought to be prepared; all finely dotted outlines of shoals, and faint impressions of soundings, which look pretty in the closet; all *true* meridian compasses and bearings are but the veriest mockery to the sailor, who, perhaps, in a gale of wind is often obliged to lay off his track by night, probably by the light of a half-trimmed lamp! Charts and sailing directions cannot be too clear, brief,* plain, and practical, and such as a sailor, in the hour of need, may turn to with confidence.

M. Givry's work is completed by two valuable tables; and twelve plates of views of land; the first of these tables contains a list of all the lights on the part of the coast here described, as also of the Coasts of Belgium, Holland, and England†; and the second gives the geographical positions of the principal points, &c., on the North Coast of France, extracted from that published by M. Bégat in his excellent work entitled *Expose des operations geodesiques,*

* We understand that the Sailing Directions for the northern and western Coasts of France will extend to six vols. in quarto.

† We beg to call attention to a serious mistake in p. 475 not noticed in the table of *Errata*; namely that the Gull Light should be placed on the *western* not on the eastern side of the Goodwin Sands.

&c., the whole forming a valuable contribution to hydrography alike creditable to M. Beautemps Beaupré who directed the work, and to M. Givry who has carried it into execution.

We have been favoured with a sight of "the Queen's Naval regulations", and heartily congratulate the navy upon this important adjustment of claims as regards service afloat. At present we can only furnish a short abstract of the contents, and shall select those points which appear to us entirely new. We some time since stated that a great change was to take place as regarded the rank of Officers, and we have now the pleasure of confirming our former statement.

All officers are divided into two branches—Civil and Military.

The Military to consist of:—Flag Officers, Commodores, Captains, Commanders, Lieutenants, Master of Fleet (rank as lieutenant); Masters, Mates, Second Masters.

Civil:—Medical Inspectors, (rank with Captains); Secretaries, Deputy-Inspectors (rank with Commanders); Chaplains, Surgeons, Paymasters, and Pursers (rank with Lieutenants); Assistant-Surgeons (rank with Mates, &c.) The above are all "Commissioned" Officers. Those appointed "by Order" are Naval Instructors (who rank with Lieutenants,) Midshipmen, Masters'-Assistants, Clerks, Naval Cadets, (late first-class Volunteers), and Clerks'-Assistants; and the "Warrant" Officers are Gunners, Boatswains, Carpenters, and Engineers.

The regulations respecting pay are important. Captains are divided into classes, and paid as follows; viz.:—

	Per Mension.
First class Captains of ships of the line, except flag ships,	£53 14 0
Second Class Captains of line-of-battle guard-ships of the Ordinary, and other such establishments	46 0 8
Third Class Captains of regular flag-ships and fourth rates	38 7 0
Fourth Class other Captains	30 13 8

Commanders and Lieutenants as before. Masters, 16*l.* 6*s.* 8*d.* in line-of battle ships, and 14*l.* *in all other ships or sloops.* And store allowances as follows when in charge:—First-rates, 6*l.* 10*s.* 11*d.*; second-rates, 5*l.* 19*s.* 10*d.* third 5*l.* 5*s.*; fourth, 3*l* 19*s.* 1*d.*; fifth, 3*l.* 14*s.* 9*d.*; sixth, 3*l.* 2*s.* 2*d.*; sloops, 2*l.* 17*s.* 4*d.*

Gratuities and pensions much altered. Pensions to widows of Officers killed in action or drowned in the execution of their duty, as follows:—

	Killed in Action.	Drowned. &c.
Widows of Captains	£200	£120
" Commanders	120	90
" Medical Inspectors	90	80
" Secretaries to Commander-in-chief and Dep. Inspectors	80	70
" Lieutenants, Masters, and Captains of Marines	70	60
" Chaplains, Secretaries to Junior Flag Officers, Surgeons, Pursers, Naval Instructors, and First Lieutenants of Marines	60	50
" Second Lieutenants of Marines, and Assistant Surgeons.	50	40
" Gunners, Boatswains, Carpenters, and Engineers.	35	30

Under ordinary circumstances the widows' pensions are the same as previously until after retired Commanders. The changes are, Medical Inspectors, Secretaries to Commanders-in-Chief, Deputy Medical Inspectors, Lieutenants, *and Masters,* 50*l.*; and the widows of Naval Instructors are to receive the same pensions as those of Chaplains, viz., 40*l.*

The new scale for compassionate allowances and gratuities is highly honourable to the heads and hearts of its originators, whoever they may be. Mothers (if widows), and (unmarried) sisters of Officers killed in action leaving no widows, are under special circumstances to have *pensions*; and upon the whole, our casual glance leaves a strong impression that the changes are improvements, and that they will give general satisfaction. The New Instructions will be issued shortly.—*Naval and Military Gazette.*

New Charts.

(Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.)

The Island of New Providence, *surveyed by Commanner E. Barnet, R.N.*
The Harbours of Marmarice and Karaghatch.—*Commander Graves*, 1841.
Hydra Bay, *including Spezzia, Dhoko, &c.,—by Commander Graves*, 1838.
Fourni Islands, *with the adjacent parts of Samos and Nikaria,—by Lieut. S. Brock*, 1835.*
The Strait of Samos, *or Samos Boghaz.—by Lieut. S. Brock*, 1835.*
Port Deremen, *Gulf of Kos,—by Commander S. Brock*, 1838.
Port Mandri, *Coast of Attica,—by Mr. T. Elson*, 1829.
Town and Road of Kos,—*by Commander Graves*, 1838.
Skehir Oghlan Islands,—*by Commander S. Brock*, 1838.
Syra Island,—*by Commander O. Stanley*, 1835.
Panama Bay,—*by Capt. Sir E. Belcher*, 1837.
Tarbert Road, *Shannon,—by Commander J. Wolfe*, 1841.
Foynes Harbour, *Shannon,—by Commander J. Wolfe*, 1841.
Utila Island, *Mosquito Coast,—by Commander R. Owen*, 1835.
Yedi Atala, *Gulf of Kos,—Commander S. Brock*, 1838.
Crooked Island, *Anchorage Bahamas,—by Commander Owen*, 1834.
Port Gallipoli, *Gulf of Kos,—by Commander S. Brock*, 1838.
Cape Krio, *with the Ruins of Cnidus,—by Commander Graves*, 1838.
Lough Derg, *on the River Shannon,—by Commander J. Wolfe*, 1839.
Gumishlu Port and Bargylia Creek, *Asia Minor,—by Commander Graves*, 1837.

The Sextant.—Of the many which are made in modern times, we have been much pleased with that of Mr. Dennis, of 118, Bishopsgate Street. There is a degree of strength about it, combining correctness of principle with an attention to minutiæ and good workmanship, and withal a due regard to economy; which essential qualities only require to become known to make it a favorite, and to secure it that extended patronage which it deserves.

Promotions and Appointments.

(From the Naval and Military Gazette.)

Admiralty, *Jan.* 8.—In pursuance of Her Majesty's pleasure, Sir James Hawkins Whitshed, Bart., G.C.B., Admiral of the Red, has been promoted to the rank of Admiral of the Fleet.

* Under the orders of Com. Copeland: the rest of this officer's work was done under the orders of Com. Graves.

PROMOTIONS.

CAPTAINS—J. Adams, E. B. Tinling, W. Smyth.

COMMANDER—F. W. Horton.

LIEUTENANTS—Hon. P. F. Pellew, F. H. Short, Hon. F. Curzon.

SURGEON—J. Douglas, M.D.

APPOINTMENTS.

ADMIRAL—Sir J. H. Whitshed, Bart., G.C.B., to be Admiral of the Fleet.

VICE-ADMIRAL—Sir J. C. White, KCB. to be Commander-in-Chief at the Nore.

CAPTAINS—E. P. Halstead, (1842), to study at Naval College—A. Ellice (1831) to be Second Captain to the *Victory*, and Superintendent of the embarkation and departure of the foreign mails at Southampton.

COMMANDERS—J P. Bower to *Hecate*—H. G. Morris to *Wolverine*.

LIEUTENANTS—R. B. Æ. Macleod, A. Anderson (1842), J. Wilson (1843), J. S. Robertson (1842) to *Madagascar*—A. P. Green (1842) to *Plover*—A. R. Dunlop (1842) to *Wasp*—H. S. Hillyar (1842) to *Wolf*—T. E L. Moore (1843), E. Collier (1815) T. W. Purver (1841) to *Caledonia*—C. W. Bonham (1843), F. E. Forbes (1843) W. C. Lambert (1842), J. B. Ballard (1843), C. A. Kane (1833) to *Cornwallis*—J. D. A. C. Agnew (1843), T. S. Hill (1843) to *Pique*—O. P. Knott (1840) to *Curacoa*—M. R. Dyett (1843) to *Scylla*—W. T. Bate (1841) to command *Young Hebe*—S. F. Short (1840) to command *Locust*—R. M. Robertson to *Warspite*—C. Hawkey (1843), E. J. B. Clarke (1841), J. W. Oldmixon (1812) to *Hecate*—H. T. Veitch (1843), W. J. Wiseman (1838) to *Excellent*—H. King (1841) to *Apollo*—J. M. Boxer (1840) to *Illustrious*—J. Harper (1815) to command *Experiment*—R. Suckling (1838), F. Willoughby (1843) to *Alfred*—E. L. Strangways (1842) to *Electra*—H. L. Griffiths (1842) to *Imaum*—G. Winlo (1843) to *Satellite*—Hadaway (1828), W. Mottley (1841) to *Penelope*—C. Forsyth (1843), H. Stokes (1842) *Helena*—W. P. Crozier (1837) to *Alban*—G. Gore (1837) to *Cyclops*—O. Cumberland (1811) to *Spy*—W. H Mowbray (1843) to *Albion*—C. D. Pasco (1843) to *Vestal*—G. Clinn to *Hyacinth*—J. Crompton to *Frolic*—C. E. Rowley to *Queen*.

MASTERS—R. M. Fox to *Hecate*—J. H. Norris to *Viper*—E. F. Cavell to *Satellite*.

MATES—W. R. Surridge to *Hecla*—G. Kerr, G. W. Towsey to *Pluto*—W. H. Payne to *Blazer*.

SURGEONS—J. M'Ternan to be Assisting Surgeon of Greenwich Hospital v. A. Nisbet to be Deputy Inspector of Hospitals at Greenwich Hospital—R. B. B. Hopley to *Hecate*.

SECOND-MASTERS—W. H. Petch to *Penelope*—W. Brodie to *St. Vincent*—W. Betts to *Volage*—G. H. Thain to *Victoria and Albert*—T. J. Willier to *Alban*—H. Hunter to *Imaum*—J. P. Dillon to *Thunder*—J. Mathews to *Acheron*—J. Loane to *Pickle*—D. Randal to *Alfred*—E. Anjier to *Snipe*—H. F. Collins to *Shearwater*—W. G. Sturgess, C. Grigg to *Albion*.

ASSISTANT SURGEONS—W. Macdonald to *Wolf*—W. Bule to *Apollo*—D. B. Whipple to *Agincourt*—W. Bateman to *St. Vincent*—F. Stupart to *Alban*—A. Robertson to *Queen*—J. Campbell to *Cyclops*—H. J. Domville to Greenwich Hospital—C. Coffey to *Albion*—A. Jack, F. N. Slight to *Caledonia*.

MASTERS' ASSISTANTS—F. Krahle to *Camperdown*—C. Dounward to *Satellite*—F. Inglis to *Victory*.

MIDSHIPMEN—J. F. Maitland to *St. Vincent*—H. W. Elliott, W. Wood to *Penelope*.

NAVAL CADETS—Hon. W. Ward and G. M. Carrington to *St. Vincent*—F. Stackhouse to *Satellite*—W. Templar, W. Scovell to *Albion*.

PURSERS—W. Norcock to *Hecate*—T. Gulliver to *Apollo*—E. D. Back to *Pilot*—J. Giles to *Pique*—G. J. Starr to *Electra*—J. R. Tate.

CHAPLAINS—T. W. Bennet to *Illustrious*—Rev. J. Hind to *Penelope*.

NAVAL INSTRUCTORS—R. Oram to *Penelope*—W. Johnson to *Indus*.

CLERKS—J. T. Riccalton to *Mohawk*—J. E. Price to *Savage*—W. T. Biddlecombe to *Fair Rosamond*—W. Slaughter to *Hecate*—G. Penfold to *Alban*—H. Gilpin to *Albion*—W. Lapidge and R. Elliott to *Cyclops*.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

In Upper Belgrave Street, Jan. 13, the wife of W. Mills, Esq., R.N., of a daughter.

On Jan. 6th, at Hardaway, near Gos-

port, the lady of Lieut. Mapleton, RN., of a son.

Marriages.

At Marylebone, Jan. 13, R. Jennings, Esq., to Agnes, daughter of Vice-Admiral Sir E. Hamilton, Bart., KCB.

Deaths.

On the 7th Jan. at Studland, Dorsetshire, Sir C. E. Nugent, GCH., Admiral of the Fleet, aged 85 years.

On the 17th of Jan., at Bath, Vice Admiral Sir R. L. Fitzgerald, Knt. KCB. aged 68 years.

On the 24th of Jan., at Sheerness, Vice Admiral Sir E. Brace, KCB., aged 71 years.

On Jan. 24th, at Isle of Wight, Lieut. J. H. Peel, R.N., aged 47 years.

On Jan. 14th, at Kingsland, Commander C. Champion, RN., aged 72 years.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of December, 1843 to the 20th January 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Th.	30·35	30·39	43	47	41	48	S	SW	1	2	bc	o
22	F,	30·43	30·39	43	43	42	49	S	S	4	4	bc	od (4
23	S.	30·38	30·40	52	54	49	55	SW	SW	2	3	o	o
24	Su.	30·46	30·49	50	53	50	54	SW	SW	1	1	b	b
25	M.	30.51	30·45	48	49	48	51	S	SE	1	1	o	o
26	Tu.	30·38	30·36	44	44	43	45	SE	SE	1	1	ogd (2)	ogd (3) (4)
27	W.	30·41	30·46	43	46	43	44	NW	NW	3	2	ogd 2)	o
28	Th.	30·51	30·52	43	49	42	48	SW	SW	1	1	o	o
29	F.	30·49	30·43	43	43	43	44	S	SE	1	1	o	og
30	S.	30·30	30·20	40	41	38	42	S	S	1	1	o	ogr 4)
31	Su.	29·96	29·87	41	45	39	47	SW	SW	3	5	o	qop 3)
1	M.	29·57	29·55	33	34	32	35	NW	SW	4	2	os (2)	b
2	Tu.	29·46	29·68	32	33	30	34	N	NW	4	4	os 1)	bm
3	W.	29·91	29·84	21	36	19	39	S	S	3	2	bc	bcd (4)
4	Th.	29·50	29·66	43	48	39	49	SW	NW	2	2	or (1)	o
5	F.	29·65	29·57	51	52	43	53	S	SW	4	6	or (1	qor (4
6	S.	29·28	29·24	45	48	44	51	SW	W	6	6	qbcp (1)	qbc
7	Su.	29·52	29·56	38	43	37	44	W	NW	4	2	b	bcm
8	M.	29·82	29·94	34	41	32	42	NW	N	5	5	bc	o
9	Tu.	30 30	30·33	35	34	35	36	NE	E	3	3	o	o
10	W.	30·16	30·26	43	41	33	43	NW	NW	3	1	or (1) (2	bm
11	Th.	30·32	30·36	38	42	36	44	W	W	1	1	om	bcm
12	F.	30·23	30·10	38	42	56	43	S	S	2	3	bcm	or (3) (4)
13	S.	30·02	30·00	39	41	38	42	NW	N	2	4	or (1)	bcr 4)
14	Su.	30·11	30·23	34	35	33	36	NE	NE	2	4	ors (1) (2	bc
15	M.	30·33	30·31	28	33	27	35	NE	NE	3	3	b	bc
16	Tu.	30·25	30·17	27	32	25	33	NE	NW	3	2	bcm	bcm
17	W.	30·14	30·14	33	42	30	43	N	NE	2	2	bcm	o
18	Th.	30·20	30·16	41	43	38	44	NW	NW	3	4	o	o
19	F.	30·02	29·91	42	44	38	45	W	NW	4	6	o	qo
20	S.	29·97	29·99	37	39	36	40	NW	N	4	5	bcm	bm

December 1843.—Mean height of the Barometer=30.320 inches; Mean temperature = 44·3 degrees; depth of rain fallen 0·31 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

We have received the letter signed P. P. too late for our present number, it shall appear in our next.

The Thunderer's Voyage will be completed in our next.

Port Royal and its Associations will be continued in our next.

Errata.—Page 9, line 6, *for* Aqu? *read* Ayre.

Hunt, Printer, Carlisle Street, Maida Hill.

The West Coast of Africa South of the Equator.
By Com. H. J. Matson, H.M.S. Waterwitch, 1839-43.

Elephant Bay.—Is one of the best anchorages on this part of the coast; it is perfectly secure and sheltered from the only winds that blow, the south and south-west. It may be known at a great distance by a very high piece of table land near the bottom of the bay, and under which is the best anchoring ground; that near the eastern shore is rocky in some places. The rollers or caléma which occasionally set in along the whole coast, are not felt in this bay. Fish can here be procured by the seine in great abundance, and the hills abound in game and wild animals of all kinds, which owing to there not being any inhabitants, are remarkably tame. This is by far the best place on the coast for refitting and refreshing the ship's company after a cruise. I have repeatedly anchored here for a few hours, merely for the sake of giving the men a run on shore, to wash their clothes, to bathe, and haul the seine. It is the only place where this can be done with impunity; the climate is very salubrious, as is the whole coast to the southward of Salinas. Before anchoring in this bay to refit, it would be as well to procure a bullock or two, and some vegetables at Little Fish Bay (lat. 15° 13′ S.),which can be purchased there on very reasonable terms.

Water cannot be procured in Elephant Bay excepting during a rainy season, which sometimes does not occur once in five years; there was not any rain whatever during the years 1840-41-42; but I have been informed that when the rains do set in they continue incessantly for weeks together, and the country then becomes almost inundated. The appearance of a number of large water courses, seems to corroborate this statement. Excellent oysters can be gathered from the rocks on either side of the bay.

The Friars rocks are in lat. 13° 14′ S., and long. 12° 44′ E., and are about twelve or fourteen feet high.

Luash.—In lat. 13° 0′ S., and long. 12° 57′ E., is a very snug harbour for small vessels, completely sheltered from all winds. It is here that the slave vessels belonging to Benguela generally embark their slaves.

Salinas Point.—Is a piece of low flat sandy land, extending five or six miles beyond the high land, and has a remarkable tree at its extreme point. There is a reef to the southward of it, and the water between it and Luash is shoal; but to the northward of the point the shore is very bold, there being ten fathoms within a cable's length of the beach. It is however dangerous to approach it during the night, for the beach being of white sand, and projecting so far from the high land behind it, renders it difficult to be seen until very close. Many vessels have run on this beach in a fine clear night.

The coast between Salinas and St. Phillips Bonnet does not appear to have been surveyed by Captain Owen, or so imperfectly as to mislead strangers. The Sailing Directory gives the course and distance from Salinas to St. Phillips Bonnet, as E.N.E. $\frac{1}{4}$ E., but it is not possible to make a direct course between these two points; the land between

them forming a segment of a circle. The English schooner Harrington was totally lost on this beach in March, 1843, she had taken the bearings of St. Phillips Bonnet at 6h. 30m. P.M. and at 7h. 30m. she was aground. A stranger having made the high land of St. Phillips Bonnet before dark, bearing E. $\frac{1}{2}$ S., or E. $\frac{3}{4}$ S., five or six leagues, would not see the intervening low land, and would perhaps (guided by the charts and Sailing Directory) steer directly for the Bonnet; or he would consider east to be a very safe course, but even this would take his vessel on the beach, (off which there is no anchorage).

When St. Phillips Bonnet bears E.S.E. you may steer directly for it, and having passed it at any convenient distance, proceed into Benguela Roads, the plan of which by Captain Owen is very correct. A little to the westward of the Bonnet are several snug little coves, where boats or small craft can lie unseen. In one of these a boat belonging to the *Waterwitch* remained concealed for nine days, watching a slaver in Benguela Roads, which she captured on her leaving the anchorage, with 390 slaves on board.

Bahia Torta.—Is a fine spacious bay, in which there is good and secure anchorage. I sailed round it in the *Waterwitch,* but had no opportunity of making a survey.

Benguela.—Is in a wretched state of dilapidation and decay; the houses originally only of mud, are now falling to pieces. There is scarcely any trade but that in slaves, and even that has been almost entirely suppressed by British cruisers. The soil is perfectly barren, not the slightest appearance of vegetation, excepting near the river Catumbela. On leaving this anchorage, a vessel should not bring the town to bear to the westward of south until she is four or five miles distant, she will then be clear of the shoal to the northward.

Lobito.—In lat. 12° 20′ S., and long. 13° 31′ E., is a very excellent and secure harbour, the best on any part of the coast, but it is not noticed in any chart or book of directions. It appears to have been unknown, excepting to the slave traders, until it was discovered by the *Waterwitch* in 1840. Even the Portuguese vessels of war, and the military authorities professed entire ignorance of such a place. An attempt has lately been made to remove the Government establishments from Benguela to Lobito, and a fort and a custom house are already in course of erection. Water can only be procured in the rainy season; at other times it must be brought from Anha or Catumbela. Fish can be taken with a seine in great abundance. I made an accurate survey of this harbour in December 1840, a copy of which I supplied to H.M. cruisers on the station. The beach on the north-east side of the harbour is almost perpendicular, there being in most places ten fathoms within thirty feet of low water mark. This harbour is not easily made out by a stranger, and a vessel might pass within four or five miles without perceiving the entrance. It may be known at a distance, by a row of white marks on the hills to the northward, but the latitude (12° 20′ S.,) or its bearing from St. Phillips Bonnet (E.N.E. twenty-three miles) is the only sure guide.

Anha.—Is a small river nine miles E.b.N. $\frac{3}{4}$ N., from Lobito point, it runs into a small bay, which may be known by trees close to the shore. There are several Portuguese residents trading in slaves and

orchella. You may anchor in seven fathoms with the river S.E.b.S two miles.

Logito River.—In lat. 11° 58′ 30″ S., and long. 13° 45′ 15″ E., is twenty-five miles N.E.b.E., from Lobito point. It is an excellent watering place when the sea is smooth, the water coming from the mountains, is perfectly wholesome and better than at any other place on the coast. The most expeditious plan is to haul the casks off to a boat anchored outside the surf, and then raft them off to the ship, which cannot approach nearer than one mile and a quarter to the shore. Here is a Portuguese factory for slaves and orchella. Logito may be known by the high bluff point which forms the south point of the bay.

From Logito the coast runs N.N.E. $\frac{1}{4}$ E., thirty-nine miles to Quicombo bay. The shore is very bold being formed of high perpendicular chalky cliffs, which are seen at a great distance, when the sun shines to the westward of the meridian. I have run up the coast from Lobito to Quicombo within a mile of the shore without having soundings with the hand lead.

Whales Head.—In lat. 11° 35′ S., is a dark coloured point projecting about a mile into the sea from the land on either side; about two miles to the northward is a remarkable piece of table land near the beach.

Quicinga.—In lat. 11° 29′ S., is a cluster of native huts, you can seldom land here except in surf boats.

Quicombo.—The south point of this bay is in lat. 11° 20′ S., long. 13° 48′ E., off which there is a rocky shoal, on which the sea sometimes breaks, and which extends about a mile to seaward. There is good anchorage in the bay, excepting during the time of the rollers or caléma, and then it is requisite to anchor outside the point. To enter the bay you should keep the village bearing south or S.b.W., when you may anchor at any convenient distance. The inner anchorage is with the village bearing S.b.W., the south point S.W.b.W.; and the north bluff point N.E.b.N., or with the fort at Nova Redonda just shut it by the latter. On leaving the bay you should not come any higher than north-west until you are well clear of the shoal off the south point. Here are several Portuguese factories for slaves, orchella, gum, &c. Bullocks are very plentiful and very cheap, and water though indifferent, is easily obtained. The bay may be known at a distance by a white road leading from the village over the mountains. It is eight miles S.W.b.S. from Nova Redonda.

Nova Redonda.—The fort is in lat. 11° 12′ S., long. 13° 50′ 30″ E. I found it to be 1h. 18m. 23s. east of St. Helena time office, and 0h. 2m. 2s. east of Benguela fort, by careful and repeated chronometric admeasurements. This place has been erroneously laid down by Captain Owen, and the whole of this coast is very inaccurately described in *Purdy's Sailing Directory*. The town is considered to be the third in point of size and consequence in the Portuguese possessions, but the fort appears to be in a very dilapidated state. Stock of all kinds may be procured here, but no water. You can seldom land excepting in the surf boats, a number of which are always in readiness on the beach, though not always at the service of the British officers. The best an-

chorage is with the fort bearing E.S.E., in from four to seven fathoms. The town may be known by the large white houses on the hill, or at a greater distance by the very high mountains behind it.

Old Benguela Head.—in lat. 10° 47′ 30″ S., and long. 13° 41′ E., is about twenty-seven miles north of Nova Redonda; it is a high bold promontory, steep at its extremity. Between this and Nova Redonda the coast has not been very accurately surveyed, but sufficiently so for common purposes; you may boldly approach any part of it, as the water deepens when to the northward of Nova Redonda. In lat. 11° 1′ S., there is a small bay in which slave vessels sometimes anchor to embark their slaves, or to wait for instructions.

Cape St. Bras.—Is N. $\frac{1}{4}$ W., fifty-two miles from Old Benguela Head; the coast between is formed of moderately high chalky cliffs, the soundings are regular, with ten fathoms two or three miles off shore.

Rio Longo.—The entrance is in lat 10° 19′ 30″ S., long. 13° 31′ E. This has been a general rendezvous for slave vessels from Benguela and St. Paul de Loando, from which places the slaves are marched overland. There are not any inhabitants; but lions, tigers, deer, and other animals were seen in great numbers.

River Coanzo.—Only small vessels are enabled to cross the bar of this river, and those only at high water, and when the sea is smooth. When there is any swell the sea breaks wholly across the entrance. The boats of the *Waterwitch* made several fruitless attempts to enter this river. The barge of the *Madagascar* was lost on the bar, and the whole of the crew drowned, in sight of the ship. I had no opportunity of taking a survey of its entrance.

The coast from St. Paul de Loando to the river Congo has been very accurately surveyed by Captain Owen, and therefore it needs but few further remarks.

St. Paul de Loando.—I found the meridian distance between the north end of Loando island, and the Time office at St. Helena to be 1h. 15m. 39s. and between the former place and Benguela fort 0h. 0m. 42s. The trees on Loando island just open to the westward of Fort San Miguel lead you clear of the outside edge of the shoal; you may also anchor on this bearing close to Loando island, but it is indifferent holding ground. Very excellent oranges can be procured here for the crew, at the rate of half a dollar the hundred.*

Ambriz.—The best anchorage in the bay is with the bluff cliff, or south point, bearing S.E.b.S., in six or seven fathoms. Ambriz may be known by a thick green wood, close to the water, about a mile to the northward of the town; or at a greater distance by a high piece of saddle land immediately behind it.

* In the months from May to September.

(To be continued.)

Nautical Description of the Coast of China.—Amoy to Haetan Islands.—*By Captains Kellet and Collinson, R.N.*

[While the charts which have been constructed from the Surveys of these Officers are preparing, the following directions, which we have just received, may be useful to Seamen.—Ed.]

On approaching Amoy from the southward, Chapel island, called by the Chinese Tungting, and situated in lat. 24° 10′.3 N., and long. 118° 13.′5 E., or 9′.44 E. of the south-west point of Kúlang seu, may be seen from four to five leagues: it has an even surface, is about 200 feet high, and its circumference three cables. It is perforated at its south-east extreme, which shows when it bears E.N.E. or W.S.W. When in its neighbourhood, a pagoda (called Nantai Wushan) will be seen, which is elevated 1,720 feet above the sea, and is a good mark for the entrance.

Between Chapel island and the main are two shoals. The extremes of the southern one bear from Chapel Island S. 60° W. to S. 79° W. The south extreme, having only one fathom on it, is distant seven miles and a half. The northern extreme, having $3\frac{1}{4}$ fathoms, is distant five miles and a half; the direction and extent of the shoal is N.N.E. three miles and a quarter. When on the shoalest part, Chapel island bears N. 60° E., and the island of Nanting N. 63° W. The Northern shoal bears from Chapel island N. 80° W. distant from it eight miles and a quarter; it is formed by a number of pinnacle rocks which show at low water spring tides, having deep water between them. Four miles due north of this shoal, with Chapel island bearing S. 60° E., is a small bay called Tingtae, which affords shelter for small vessels in the northern monsoon; it may be easily known by the flat table head (with three chimnies on it,) forming the eastern point of the bay, and the ruin of a wall encompassing a hill above it. The pagoda of Nantai Wushan is immediately over this bay, bearing N. 15° W.

In entering Amoy harbour, should a vessel pass inside Chapel island, she must not approach within a mile of the coast after passing Tingtae point. The Chauchat, or Taetseo, composed of three flat rocks, said never to be entirely covered, but over which the sea breaks, lies N. 22° W., 10.6 miles from Chapel island. When on it, the three chimnies on Wúseu shan island are in line with the Nantai Wushan pagoda, bearing S. 82° W. By keeping Taepan Point open to the eastward of Tsingseu island, (which it will be when bearing N. 55° W.,) it will be avoided. The channel between the rocks and Wúseu shan island is five cables wide, with deep water, but dangerous for ships in consequence of the chowchow water. The passage to the northward and westward of Wúseu shan is dangerous, being strewed with rocks.

Wúseu island is 1.2 cables long, and in the centre a cable's length broad. The north-east and south-east faces of this island are steep cliffs. On its summit (which is about 300 feet high) are three chimnies intended for signals. There is a large village on the west side of it.

Tsingseu island rises precipitately from the sea; between it and Wúseu is a rocky islet with reefs to the west of it.

The entrance to the harbour lies between this island and a small island north of it, sixty feet high, called by the Chinese Chihseu, or Yisu. The shores of both islands facing the passage are steep to, but one or two rocks lie one cable southerly from Chihseu. Off Chungpat siaou, which is the rocky islet immediately to the north-east of it, lie two half tide rocks, three to four cables' distant, to avoid which, when standing to the eastward, and within half a mile of Chihseu keep the west tangent of that island open of the eastern extreme of Wúseu shan.

N.E.b.E. from Chihseu are four islands; the two nearest Tao-sao and Hwangkwa are rather larger than it, and between which there are no passages. Seaotan island is about 200 feet high, and between it and Hwangkwa there is safe channel, which may sometimes be taken with advantage by ships; thereby enabling them to weather the Chauchat without tacking. Between Seaotan and Taetan there is also a safe channel. Vessels cannot enter to the northward of Taetan, for between this island and Amoy there is only $1\frac{1}{2}$ fathom. On both of these islands are three chimnies.

From Chihseu or Yisu, to the outer harbour off Kulang seu the course is N. 38° W., four miles and a half, with a depth varying from 7 to 12 fathoms. Between Tsingseu and Taepan is a deep bay with many rocks and shoals in it, to avoid which vessels should keep Pagoda island, or Kiseu, open of Taepan point. Vessels entering Amoy from the northward, to clear the shoal which extends three miles due south, from the western pagoda on Quemoy, and dries at low water spring tides, must keep the southern extreme of Taetan island open to the northward of Pagoda island. With these marks on when the pagoda on Quemoy bears N.N.E., you are clear of the danger; or, a better mark is, as Pagoda island may not be seen, after passing Leeo-Loo point to steer to the southward until Nantai Wushan, or the high pagoda bears west, when you may steer west without fear until you make Wúseu shan and the Chauchat. The south end of Amoy is a sandy point with several rocks extending two cables from the shore. Between this point and the next west of it there is a half tide rock, three cables from the shore. From the south point to the remarkable stone on the beach, the three fathom line extends two cables from the shore.

The channel between the island of Kulang seu and Amoy is so narrow, that a stranger would not be justified in passing through it until he had anchored, and made himself acquainted with the marks. A rock at the entrance of this narrow strait, called Cokers rock, with only four feet water on it at low water spring tides, may be avoided by bringing the centre of Hauseu island on with a remarkable peak, the highest but one on the land behind it. When the rock off the south tangent of Kulang seu is in line with Pagoda island, and a pinnacle rock off the eastern extreme of Kulang seu is in line with a remarkable tree point on that island, you are on it. From this position a vessel should keep as close to the Amoy shore as the junks anchored off it will allow them. The small island off the City point has deep water close to it;

between this island and Hauseu, (*i.e.* Monkey island), is the best anchorage for a ship, having a reef that extends from City point in a N.N.W. direction lying to the northward of her. Vessels cannot anchor in the straits without a great risk of losing their anchors, as the bottom is very rocky and uneven. North of the island of Kulang seu, there is a pinnacle rock which is nearly covered at spring tides, and distant from the shore three cables. The mud dries between this rock and the island. All the points of Kulang seu have rocks off them; off the south-west extreme there is a half tide rock, one cable and a half from the shore.

To the westward of Kulang seu there is a good and safe anchorage in 7 or 8 fathoms. Close to either shore the water is deep, but in the centre there is a bank with from 7 to 9 fathoms on it. Vessels wishing to anchor off the town, should use this passage, and by keeping the rocks off the west extreme of Kulang seu in line with a remarkable sharp peak on the south shore of the harbour, until the peaked rock off the north end of Kulang seu bears to the southward of east, she will avoid the mud bank and rocks running off that island, and may choose her berth off the city. The channel round the island of Amoy is so narrow and winding that directions would be useless; the chart is the best guide. Besides the excellent shelter that this harbour affords, the Chinese have docks for building and repairing their largest junks. Fresh water and supplies of every description may also be had of the best quality and cheap.

Shelter may be obtained under Quemoy, but the entrance is not well known or sounded yet. N. 74° E. from the Chauchat, and distant sixteen miles, is a small indentation in the coast called Leeo-Loo bay, where small vessels shelter themselves from the violence of the north-east monsoon, by bringing the south extreme rocky point of Quemoy in line with Nantai Wushan pagoda, and as close as possible to the point forming the eastern head of the bay, in four fathoms sandy bottom, with fair holding ground. There is a village amongst some trees at the head of the bay, with a fort on a bluff to the westward of it. The land over it is high and easily distinguished.

E.N.E. five miles from Leeo-Loo point, is Dodds island, called by the Chinese Pakting, it is distant from the nearest part of Quemoy two miles and a quarter. There appeared to be no channel between it and the shore. A reef extends some distance to the north of it. N. 35° E. five miles from Dodds island is the point of Hooe-Tow bay, in lat. 24° 31′ N., and long 118° 31′.5 E. This bay affords good shelter from north-east winds; it may be easily known by two very remarkable peaks situated in the bottom of the bay. The eastern peak bears from the point N. 45° W. There is a shoal in the centre of the bay which extends two or three miles in a W.N.W. direction. This shoal may be avoided by keeping a remarkable hill inland, resembling a dome, open to the southward of the eastern high peak in the depth of the bay. In entering, give the point of the bay a berth of at least three-quarters of a mile, for there is a reef running off it, but on which the water generally breaks. The best anchorage is off Oyster island, but as vessels do not visit this bay, except for shelter, it would be advisable to anchor just inside the point, with it bearing E.b.S. or E.S.E. South of Oyster

island there is a ledge of sunken rocks, which at low water have only a few feet on them. To avoid these rocks, keep Oyster island to the eastward of north. Vessels from the southward, intending to anchor, should not stand too far into the bay until it is better known; there are overfalls from 10 to 4 fathoms, and there may be less water. The junks go to Amoy by this passage, and the Chinese say there is water for small vessels, but it must be very intricate.

The coast between this and Chimmo bay is clear of dangers, and the general soundings are from 12 to 15 fathoms. There is no shelter for vessels, but junks anchor under some of the points. The small Pagoda island off the south-eastern point of Chimmo bay is in lat. 24° 42′ N., and long. 118° 42′ E. This bay may be known by a pagoda called by the Chinese Kusau tah, on the highest hill in the northern end of the bay. Although vessels lie here throughout the year, it cannot be called a good anchorage, as it is exposed from E.b.N. to S.S.E. Vessels entering this bay from the northward must not approach the land nearer than one mile, as there is a rock which shows at low water, half a mile off shore, on which a vessel called the Fairy struck, and from which it has taken its name.

W.b.S. one cable and a half from the rocky islet off the northern point of the bay, is a ledge of rocks, which uncovers at low water, and on which the sea generally breaks. Half a mile to the W.N.W. of the northernmost rocky island off the south-east point are two sunken rocks, to clear which keep a remarkable clump of trees in the depth of the bay on with the right shoulder of the high land in the north-west part of the bay. There are rocks a short way from the beach all round the bay. The best anchorage for vessels is as close up to the northern shore as the water will allow; the holding ground is good. There are several very large towns in this bay, and numberless fishing boats; supplies may be had, and at cheap rates. From Chimmo bay the land stretches away to the eastward as far as 119° 10′ E., very much indented, and but little known except to vessels trading to Chinchew, or Tsiuenchau fu, with opium.

Ockseu, (or Wukiu, probably a contraction of Wukiu su,) consists of three islands, the centre one a barren rock, nearly joining the eastern island. The steamer Nemesis anchored under this island. There is a considerable fishing village on it, which is difficult to be seen unless very close. The western island is the largest, and is in lat. 24° 59′.3 N., and long. 119° 25′.5 E.

W.N.W., twelve miles, is a group of islands, consisting of one large and four small, with a reef to the northward of them, called Sootzee. These islands were seen from Ockseu but not examined. N.N.E. 12½ miles from Ockseu is the largest of the Lamyit islands, called by the Chinese Chungtung shan. It is seven miles long in an E.S.E. and W.N.W. direction. The eastern peak is the highest, being 565 feet above the sea; it is in lat. 25° 12′.3 N., and long. 119° 36′ E. There is a remarkable table land to the south-westward of it called Powshan. This island is very low and narrow in several places, and has a remarkable conical hill towards its west end. The channel to the westward of it has not been examined. Notwithstanding its barren appearance it is very populous.

To the northward of the large Lamyit is a group of small islands called by the Chinese the 18 Yit; between this group and the large island, there are numerous rocks and shoals, rendering the bay perfectly useless for shipping. N. 81° E., six miles from the highest peak of the Lamyit, is an islet called Cap, which is the south-eastern of the 18 Yit. Vessels entering the Haetan strait should pass to the eastward of this, and the Double island three miles to the north of it, keeping to the westward of a group called the Reef islands, which bear from the Cap N. 49° E., five miles. N.N.E. four miles from Double island is a remarkable White island with sandy beaches and detached hills; the channel between this and Reef island group is foul, having many rocks in it, but it has not been sufficiently examined. After passing to the westward of Sand island, which has several rocky islets on its north-west face, a pagoda situated on the point of a shoal bay, with the ruins of a town will be seen to the westward. Here vessels will have smooth water, protected from the easterly swell by Three Chimney island, which is the large island immediately to the northward of Sand island. In the centre of the channel between this island and the pagoda the water is deep. The best anchorage is close under the shore of Haetan, near to Observatory island, avoiding a reef to the westward of it, which is nearly covered at high water spring tides. Observatory island is in lat. 25° 25′ N., and long. 119° 45′ E.

The passage to the westward of Haetan has not been examined through, but as far as the examination has gone, the channel has proved narrow, with a great many dangers, of the approach to which the lead gives no warning. A vessel leaving this anchorage bound to the northward must give the south point of Haetan a good berth, as there are several rocks off it.

(To be continued.)

Account of a Waterspout or Whirlwind.

Exeter, Jan. 31st, 1844.

Sir.—Having seen in a work on Atlantic Navigation (I think it i Laurie's) that it is doubtful if waterspouts or whirlwinds (which by the same authority are considered synonymous) are dangerous to vessels, I beg leave to acquaint you that on our passage home from Sierra Leone in H.M.B. *Bonetta*, we experienced one in lat. 32° N., and long. 29° W., the effects of which might have been disastrous had we not been prepared by reducing all sail to double reefed fore-top-sail on the cap. The forenoon of the 17th of December, had been cloudy with strong breezes and squalls from the south-westward, and in the afternoon strong breezes with rain. About 4 P.M. we observed a waterspout or whirlwind coming up astern, apparently of a cylindrical form, and the elements in violent motion; we altered course a few points to avoid it, and made preparation for it by getting the hatches and tarpaulins on; but we could not escape it, and it struck the vessel with so much violence as to heel her over nearly gunwhale under, carrying away both chain top-sail sheets at the same moment, and hurrying us along with the

fury of a hurricane for several minutes, depressing the vessel's head and making all the masts quiver. It fortunately soon swept past us, and we observed it for some time afterwards whirling along on its onward course. The rain fell during the time heavier than preceding it, but not more so than in a tropical shower. I am quite convinced that if we had had more sail set we should either have been dismasted or capsized.

I have taken the liberty, Sir, to make this communication to you, in the hope that it may be the means of putting navigators on their guard in similar circumstances.

I have, &c.,
E. E. Gray,
Lieutenant R.N.

To Captain Beaufort, R.N.,
Hydrographer to the Admiralty.

Voyage of H.M.S. Thunderer to the Mauritius and Back.
Notes by Mr. H. Davy, Master R.N.—1843.

(Continued from page 78.)

Slave Ships.—In Havana and other western ports, the slavers are known and admired for their beauty of form, tall spars, and rakish Red-Rover-like appearance; they are also well found, and as far as a lavish expenditure can effect it, made efficient; but how changed the system in the Mozambique, and I believe generally in connection with the Brazils, and possibly as a *ruse* for ports in the West Indies. The vessels thus employed bear the semblance of the fair trading merchantman as much as possible, being barques and ships from 300 to 450 tons burthen, of American and Baltic build, and preserving the resemblance in paint and general appearance below and aloft; they are generally well found, and if such a word can be allowed, are the most comfortable ships for the slaves. The smaller vessels wretched in every respect, look like crazy old coasters of various forms and rigs, but mostly as brigs.

Such are the guises that slavers assume in pursuit of their horrid, but too lucrative traffic, from the celebrated Venus and Secora to those unseaworthy craft. The great holds for this slave traffic in the Mozambique are the rivers and ports between Cape Corrientes and Zanzibar; but the Quilemaine is said to be where the slaves are most numerous, and of course the trade brisk.

The American corvette Concord, of 20 guns, recently ran on the bar of a river a few miles to the northward of Quilemaine; she was obliged to lighten and throw everything overboard, and eventually beat over, where she now rides in deep water, but it is very doubtful if she ever comes out again: the captain and purser were unfortunately drowned.

Whalers and Fishing.—The black whale are numerous on the coasts of the colony, in the Mozambique and adjacent seas, and the sperm whale are successfully sought for to the northward, in the neighbourhood of the Seychelles. This mine of wealth and nursery for the most

enterprising and daring class of seamen, we appear most unaccountably to have relinquished. It is a service from the very nature of it, best adapted for training up sharp, hardy, adventurous fellows, *the men to man a fleet with;* it is a subject of deep interest to a country like England; and to revive and foster it ought to be earnestly set about; premiums and the presence of men-of-war may probably be the best means of attaining so desirable an end.

At present these advantages are almost entirely in the hands of the Americans, who literally swarm the whole of these seas, and are carrying on a very thriving trade, in all likelihood much more lucrative than ships going with low freights. It is common to meet three or four of them sailing in company; they fill up rapidly, take black whale or sperm, and when these fail, the smaller sort; anything that will yield oil: it is said of them that they also do business in the smuggling line. Two hundred American whalers touch at the Azores annually on their way out, principally to get their stock of potatoes, &c.

It appears that a few years since, the French had also allowed this valuable source of prosperity to fall into neglect, and that by premiums and protection it has been recovered and is now yearly improving. Occasionally at sea we meet an English whaler, but it is a rare sight; during the present voyage out and home we met two.

The Lagulhas bank, as is well known, abounds in fish, the coasts and bays are full of them, the seal and penguin are also frequently met with, and the feathered tribe hovering over are very numerous, from the noble albatross to the tiniest of the peterels; the solan geese, fat cape hens, and many others are met with, so glutted that ships almost sail over them. With this vast abundance it may fairly be placed in comparison with the Banks of Newfoundland, and there can be no doubt but that valuable fisheries could be established.

Time of high water at the full and change of the moon. Copied from the Cape Almanac.

Simons Bay,	3h.	00m.	5	ft. rise	Plettenberg Bay,	3h.	50m.	5	ft. rise
Port Beaufort,	3	20	5	"	Algoa Bay,	4	30	4	"
Mossell Bay,	3	35	5	"	Port Francis,	4	50	4	"
Knysna Harbour,	3	45	5	"	Great Fish River,	5	00	4	"

Heavy westerly gales cause a greater influx: moderate south-easters the reverse, which cause on the eastern coast a smooth beach.

Temperature, &c.—It was May when we were at the Cape, which is the last month of Autumn, the climate was very fine being neither too warm nor the reverse, the thermometer ranged from 55° to 62°, the surface water was 53°, and the wind mostly from the north-west, occasionally a gale; on the breaking up of which, the wind veered to west, south-west, south-east, and having remained a short time at these quarters, finally return to the north-west.

The Table Cloth.—The Table Mountain is 3,582 feet above the sea level, Gibraltar is 1,439 feet. It struck me that in a lesser degree the Levant winds of the Mediterranean produced similar phenomenon at Gibraltar. The dense vapour which caps the ridge or hangs over it in shape resembling an immense mushroom, appears stationary, while from its sides break away light fleecy clouds, which partly descend the

rock and then disappear. Similar clouds at the same time may be seen accumulating on Apes' Hill and the Queen's Seat. This is very like what I have witnessed on Table Mountain and neighbouring highlands, and are sure precursors in the different hemispheres of a south-easter and a Levanter.

This oft observed phenomenon has been concisely described as follows by Mr. Webster, in his account of the *Chanticleer's* voyage, under the command of the late Capt. Foster, R.N.

" During the summer season at the Cape, we have stated that, the south-east is the prevalent wind. It is in fact analogous, in some degree to the trade winds and sea-breezes of the tropics; but we must be careful to confine it to the southern and south-eastern coasts, it then becomes a true sea breeze, or, a rush of cool air upon the heated plains. But there is a remarkable circumstance connected with the south-east wind at Cape Town, viz. the dense mantle of vapour which rests upon Table Mountain, and rushes over its precipitous sides like a cataract of foam or vapour. This peculiar appearance is called by the inhabitants the Table Cloth.

" When a south-east wind, passing over the southern shores of the Cape, prevails sufficiently to surmount the Table Mountain, the first notice of the fact is a little mist floating as a cloud on a part of it, about ten or eleven o'clock in the forenoon. By noon the mountain becomes fringed with dew, and half an hour after, a general obscuration takes place by the mist. In another half hour the little cleft between the Devil's Berg is capped by the cloud. The table cloth is now completely spread, the south-east wind, the progress of which has been thus arrested, now forces its way onwards, and rushes down the mountain into Table Bay, with the utmost violence, producing loud and terrific noises in its course, and accompanied by a most curious exhibition. While the Table Mountain remains covered with the dense cloud, fragments of the vapour are torn from it by the force of the wind, and are hurried about the sides of the mountain, assuming a variety of fantastic shapes, and playing about the precipice according to the direction of the different currents of the wind. This phenomenon lasts till about five in the afternoon, when a little clearing, which takes place on the western edge of the mountain, announces that the table cloth is about to be folded up. By six or seven the clearance has considerably advanced; and by eight or nine every vestige of it is gone, and nothing is seen about the mountain but an ethereal sky and the twinkling stars.

" Such is the curious phenomenon of the table cloth at the Cape of Good Hope, with the south-east wind, and even while this lasts throughout the night, it will disappear in the same manner. When this is the case, in the early part of the morning a little white cloud may be seen suspended like a canopy over the Table Mountain; at ten a little vapour begins to curl and play about the mountain, and precisely the same phenomenon takes place as before. We are here supposing that the south-east wind blows for two or three days at a time. At other times when it is only of short duration, and in a hot clear day, the first symptom of this breeze is the vapour resting in little parcels on the mountains, and as these increase, so does the wind come on. But it is

not till the mountain is completely covered that it forces its way with such violence down the precipice. By the evening about nine, the table cloth is gone, and with it the wind, and a beautiful calm and serene night ensues.

" I have been rather particular in delineating the progress of this phenomenon, and have carefully noted the times when the foregoing changes take place, for observation is the best mode of rectifying opinions, and the true solution of the whole appearance has not been given, that I am aware of, with the whole of the circumstances attending it. At the base of the mountain, during the strongest period of the south-east wind, there is only a light air, accompanied by a raw cold mist and drizzling rain; lower down in the cleft a brisker current of air is felt; lower still, near the limits of the mist the strength of the wind is greater; and below this again, where there is a clear blue sky overhead, the wind rushes down with great impetuosity, occasioning a loud howling noise: all this time a violent gale is passing over the heated plain of Cape Town."

[With regard to the phenomenon alluded to by Mr. Davy, at Gibraltar, we received a short time ago the following account of it from Lieut. Ryder, of H.M.S. Belvidera, at that place.—Ed.]

A remarkable Cloud.—One morning lately at Gibraltar, the wind blowing strong from the eastward, this very remarkable cloud was observed; it resembled a bent cylinder, evidently from the appearance of the ends (*a a*) hollow, and having a rapid motion round its proper axis, in the direction of the bent arrows. It remained perfect for about ten minutes after its first appearance, and then gradually broke in the middle and slowly vanished from our view, the rapid motion being kept up while the smallest particle remained in sight. One might imagine that in its first stage of existence it had consisted of a thin flat stratum of vapour, which some sudden squall had rolled up. This would account for its cylindrical shape, and the motion would of course remain long after the acting cause had been removed; in colour it was white, as were the surrounding clouds. I have heard people say, that the clouds are classified, under what denomination would this be arranged?"

The Troops.—The 1st batt. of the 45th regiment was a remarkably fine body of men; they were mostly raised in Nottinghamshire, and their average age was not over twenty-three years. The regiment had been on board sixty-seven days when they disembarked. They commenced their march to Cape Town, (the soldiers call the distance twenty-six miles,) at 10 o'clock in the forenoon, and got in at sunset, a little distressed, as may be supposed, from being so long on ship board; going over the land with a mid-day sun was also against them. The 12th regiment, on the contrary, left Cape Town for Simons Town at 10 o'clock at night, halted once, and were all embarked by 8 o'clock next morning. We were thus peopled about the same as when we left Cork, and sailed with them for the Mauritius.

June 9th, at 4h. 30m. P.M., the twentieth day from the Cape, we

made the high land of the Mauritius, distant fifty miles; at sunset Cape Brabant bore N.W.b.N., and the Bamboo Mountains north, the tops only of the mountains we could see, and they appeared like islands; the weather was fine with a fresh south-east trade, so that we closed with the land rapidly, and at 9 o'clock saw distinctly the lights at Grand Port.

On this windward part of the island the coast is fronted with extensive reefs, stretching far out to seaward, and on which the sea breaks heavily. As the moon was bright we continued steering large on the starboard tack, keeping the line of breakers in sight to leeward, and by midnight were abreast of Flacg. Calculating that, with the south-east wind which was inclined to draw more southerly there would be a set to the north-west we shortened sail and hauled off until daylight; at 2 o'clock, we made Round Island, and found that the ship was drifting a fair course. The morning was fine and clear, such a one indeed as we all wished for, to enjoy the magnificent scenery before us. The Bamboo Mountains with the four remarkable peaks called the Cat and Kittens were just shutting in; to the back of the richly cultivated plain of the Pamplemouse, rose the Peter Botte and Pouce. Ahead were the islands among which we were to thread our way, and the ship was going nine to ten knots; what more could be wished for. The Bamboo Mountain is nearly 3,000 feet above the sea, and is a little on the north side of Grand Port, forming the most prominent feature of the south-east coast; the Cat and Kittens are also easily made out being a single sharp peak with others of lesser height clustering round it. I believe it was so named by our soldiers, quartered at Mahebourg, and is now in general use.

The islands lying off Pamplemouse are five in number. Round Island and Serpents Island are farthest out and to the north-east; to the northward are three islands which it is usual to speak of as Flat Island; they are however distinct, with separate channels and named Gabriel island, Flat island, and Sugar Loaf island; the Gunner's Quoin lies nearest in, and is the most remarkable. In rounding from the weather side, have the first reefs in, and look well to the flying kites before entering among the islands, as the ship must be brought on the port tack after getting through, and the breeze usually freshens with gusts off the high lands. The passage through is between Flat Island and the Gunner's Quoin, avoiding the reefs on either side by keeping near mid-channel. Attending to the bearings of the other islands, and to their opening out clear of each other, these also serve as guides to clear the dangerous reef which stretches out from Cannonniers' Point.

Our running through the passages was a fine sight, and was enjoyed equally by ourselves as those who had collected to see the *big ship*. The rocks appeared close to, and the transit of objects was very quick as we ran past, going ten knots under a crowd of sail. Cannonnier's Point which is low and in nowise remarkable of itself, is known by a fort near the point, it being a military outport. We rounded it at a three-quarter mile distance, and were enabled close-hauled to lay along parallel with the coast about a mile off, which is a good distance, as reefs project out on the whole of this leeward part of the island, as well

as on the windward side, with this disadvantage that it is seldom they are made known, by the sea breaking on them.

When abreast of Tomb bay (so named from the pathetic story of Paul and Virginia whose tombs adorn a neat garden near by) we first made out the Bell buoy, and keeping it a little on the port bow steered safely to it, where we anchored at noon. This is the outer anchorage of Port Louis; the bottom is mud and varies in depth of water from twenty to ten fathoms; it is capable of berthing many sail of vessels, and is used by those requiring but a short stay, or if going up the harbour to wait for the steamer. Our anchorage was close to the Bell buoy in ten fathoms, mud bottom, where we remained at single anchor for ten days, with the citadel on with the Peter Botte south-east, the apex of the Gunner's Quoin in sight over the land just within the outer point north-east, and Grand river S.S.W.

To sail round the island the distance is 100 miles; the windward passage is more than two-thirds of this, whereas coming in by the Morne Brabant is a very short cut, and as N.E.b.E. is high enough to lay up, it is clear that during the season of the south-easters, which vary always to the southward, it is not only so much the shortest but also the safest course to adopt.

June, July, and August, are the winter months, when the south-east and south winds blow with the greatest regularity; during the other months the prevailing winds are from the south-east, but varying to the eastward, and interrupted by northerly and north-west winds. I have been both ways, and when practicable, prefer much the short cut. We should also bear in mind that the directions we study are mostly intended for merchant vessels, and properly so even to the weakest and most unweildy of them; still for fast sailing men of war it must be a heavy breeze indeed that would prevent their working up to the Bell buoy, not that I would advise the attempt, but the long leg and the short one which may be taken advantage of the greater part of the year, I most certainly would, when probably a couple of tacks would fetch in. In taking the long road there is the doubt of getting the length of the islands before night fall, when without a clear moonlight, to attempt the passage would be hazardous. Even under favourable circumstances it is incurring a great risk to run through by night, unless there be some previous knowledge of the coasts, reefs, and the set of tides.

Point Malheureuse with the extensive reefs which surround that part of the coast, is the wreck shore of the island. Here many vessels after their long journey with valuable cargoes on board, by some unaccountable management, conclude their voyage. Among the heavy breakers the vessels are certain of breaking up or bilging, but fortunately very seldom any lives are lost. On our passing the point we saw an English brig on the reefs; she was just out from England with a general cargo, and had gone ashore running by night; people were then employed saving the cargo.

What a cheering sight it was when we anchored, to see the tiers of shipping lining either side of the harbour, so close and well packed that the centre part alone was clear, just the passage kept free. The *Winchester* with the flag of Admiral Percy, was at the moorings near

Cooper's island. The little *Beagle* was also there, and a wee French brig with a pendant as long as herself, and an ensign large enough to set off the Friedland on a Sunday. In company with ourselves at the outer anchorage were several vessels, a steamer smoking past, while in the offing were vessels making for the Roads. There was a life and bustle going forward, ships heaving down, others in all the various stages of refitting, while those whose cargoes were complete, decked themselves out with gay flags in triumph at their success. What can be a more welcome sight than the deeply laden merchant ship homeward bound; does it not speak to an English heart of commercial wealth and national prosperity; cargo-lumps and boats of divers rigs, from the neat man-of-war barge to the light pirogue, added to the busy scene, the famous Peter Botte and Pouce with mountain ridges of lesser elevation, the town and suburbs with the commanding citadel and sea forts; a country on either side laid out in plantations and country seats,—all these instead of indicating the principal port of a small island, might more readily have been taken as proofs of the capital of a great country.

The channel lies south-east and north-west and is between coral reefs running out from Cooper's island on the north side, and from beyond Fort Blanc on the south, these are marked by a line of black buoys on either side. The old system of a long line of hawsers being laid out and stopped to the buoys, was a very tedious method, I remember, of warping in.

Now, the Prince Albert steamer of 80-H.P. walks the shipping up in style; she appears to be well worked, tugging the mud vessels outside the harbour, and taking vessels in tow between whiles; she can also take a regiment of soldiers on her deck, the 12th and 87th were disembarked and embarked in her.

It appeared to me that the coral reefs were growing up; the bank on the south side was quite dry at low water, though the rise and fall of the tide is not over three feet. Our remaining at the Bell buoy was because there was no room for us up the harbour; the place for men-of-war of large size, is in a small bight of deep water close to Cooper's island, where it is necessary to moor head and stern. This place is large enough to berth two sail of the line, moored with their own anchors. At present moorings are laid down in the centre of the bight and of course the space is occupied by one vessel. The scanty room for men-of-war, ships of the line, is a serious drawback; it is true a large fleet may anchor outside, and I should think from a few soundings which were obtained, that large ships could also anchor in line towards Grand River.

The Bell buoy is a fine large beacon, and is moored in the fair way just without the channel. The pole, which is well secured to the flat is painted white, and is about fourteen feet high, with a flag or large vane at the top; it can be made out with a glass at the distance of six miles easily. The bells are fixed about two-thirds up the pole in such ways that the least motion of the water causes one or the other of them to strike. We were very close, and can safely vouch for their due performances, as by night when the ship was quiet, their unceasing monotonous tolling, at regular, almost minute intervals,

were the most disagreeable, tiresome sounds I ever remember; a general shindy among them would have been quite a relief.

Supplies.—Water is the only cheap article in the island, it is plentiful, of excellent quality, and it is only necessary to send the boats; they lay close to, the casks are quickly filled, and any quantity may be had. For all other articles (the prices are annexed to these notes) it is without exception the most expensive place, not only that I have ever been at, but even heard of; a guinea for a leg of mutton, thirty shillings for a turkey, and six-pence for a pound of potatoes, rather a serious thing for dinner parties, of which, however, like all other English places, there is a constant succession; the Mauritius not being behindhand with our other possessions in hospitality. For the most part the supplies are brought from the Cape colony, Madagascar, India, and other parts of the world. Very little is produced on the island except sugar, and sugar plantations cover nearly the whole cultivated portion of the country.

The People.—I should think that Port Louis beats the habitable globe for the various specimens of different nations and tribes which make up its population. In a trice may be seen Chinese, Cingalese, Bengalese, Moors, Arabs, the Malagash, and many others of the east. African blacks of all sorts; people of every nation in Europe, dozens of Yankees, with a variety of South American breeds, and lastly our friends the Smietch. It was a wonderful sight to stand on the quays for a short time and observe these different races moving by, all apparently busily employed, and the din of voices talking and shouting was a perfect babel. The bargains and altercations frequently produced fierce contention, and then might be seen the scorn and hatred of creed and race burst forth, the fiery Moslem and the subtle Jew, the avaricious Hindoo, the cunning Chinaman, and the dauntless independant Malagash. Then too to watch their curious manners, their varied appearance, and strange costumes, it was a peep into the great family of man. Here are five of them which I selected on the spot:—

A young French Creole.—Bearded and moustached, hair smooth and very long, light green cravat, nix the shirt collar, puce-coloured coat, and bright buttons of the last Parisian cut, figured vest, and sky blue trowsers, a profusion of gold ornaments.

A young Chinaman.—Face smooth, the tail reaching to the calf of the leg, with a straw hat and loose cotton frock and trowsers.

A Malagash.—Bare headed, the hair twisted and worked into snake looking points, which stick out, and have a very Medusa like appearance; their only garment is a white cotton sheet, worn as a flowing robe, similar to the Roman toga. They are a fine looking race, and with this simple dress only, there is yet a noble look about them.

A Bengal Cooley.—A Scotch cap and a soldier's coat, otherwise perfectly naked, except a cloth round the middle.

The language used is French Creole, with the Bengalese, Nega, and some odd words belonging to no nation, all intermixed, and requiring but a graft of Chinese to make it a most unique tongue.

(To be continued.)

Discipline in the Merchant Service.

Sept. 16*th*, 1843, *Lat.* 3° 24′ *S. Long.* 26° 23′ *W.*

Sir.—In page 367 of the *Nautical Magazine* of June last, a letter appears written under the designation, of a "Cautious (therefore a true) friend to the sea service." This said "Cautious friend's" observations are upon the able remarks of your intelligent correspondent "Mexicano," given in page 229 of your April number, *N. M.*, upon the better government of the merchant service. They run thus, "A man in authority, such as a captain of a trading ship, with a discreet mind, and feelings attuned to the dictates of humanity, writing on this subject, may perhaps be excused for entertaining a desire to hold the power of summarily punishing a mutinous seaman at sea; but he should recollect that unfortunately all masters of ships, or other vessels, are not possessed of that strict integrity of principle that would control the fiery spirit of anger, dislike of a particnlar individual, or any other unworthy passion of the heart; every man in whatever station of life he may be, might just as well desire to be the executor of the law as a judge, or as a magistrate; but it would be incompatible with reason and common sense, to delegate such power to those, who, in the ordinary way, have any body of persons under their authority."

What the writer means is not easily understood, only that he holds a very mean opinion of the masters of vessels, and exhibits a total ignorance of the nature of our service.—Is it not, Sir, a piece of presumption, for any man to write so strongly upon a profession, of the nature of which he is entirely ignorant? It is generally allowed that the character of sailors is that of being generous and humane, and of course ship-masters may be expected to hold generosity and humanity in a greater degree from their education and connexion with better society, during their peregrinations.—This writer thinks masters of vessels cannot be sufficiently instructed how to administer justice. And who is to administer justice for them on the high seas? I would tell him he ought to know that there is a law in every man's breast which tells him, how and when to render justice to his fellow creatures, and also when to demand it.

I am sure none will dare to urge, but through the grossest ignorance, the taking away from masters the power of correcting or punishing at sea, the disorderly, disobedient, and riotous; the power of bringing such offenders immediately to a sense of their duty. It is not to be understood that we seek new laws, to give authority to punish capitally or even to punish for strictly moral crimes, or past offences. No! we seek authority simply to be able to compel our crews, by such means as we have, to do their duty when they obstinately refuse duties they have bound themselves to perform readily. Is it a hard case that the licentious, and unruly, the disobedient and careless, should be constrained by sufficient rule to use a becoming conduct? Is there no compulsion for this in ordinary society? And because it may happen that the chief magistrate of a district is not an intelligent and religious

man, the community may be disturbed and injured at the pleasure of the riotous. Surely not, nor can it tend to aggravate crimes, the granting due power and authority to the head of any society to keep all its members in order; and how much more necessary to be given to the masters of ships at sea:—he stands alone, and cannot better his condition in any way, upon the high seas (so many thousand miles from any civilized land,) as all others may on shore, who have in the ordinary way, any body of persons under their authority. The comparison is truly ridiculous, and it will be an act of justice, as well humanity, granting full powers to correct the unruly, giving us a sound and judicious code of laws, drawn up upon a perfect knowledge and experience of the sea service, for, from him "to whom much is given," let much be required.

Is it not lamentable to see the serious conflicts which are occurring daily on board of ships upon the high seas. The misunderstanding which has taken place upon the late alterations in the Maritime laws, has created much disorder throughout the merchant service; its discipline and old rules have been so much meddled with, that a tame submission to capricious conduct has lately been practised; the diffidence of the masters has become so great, they are completely at a loss how to act, with respect to the present marine law:—the sailors have taken advantage of this, and with the majority of ships upon a long voyage, during some period of it, the ship is in little better than a mutinous state:—I assert that delaying punishment upon the resistance of duty at sea, is a positive encouragement to grosser acts of insubordination, and endangers the ship; by giving time to the turbulent spirit to mature more diabolical designs arising altogether from mistaken principles of humanity, these evils grow to such an extent that it requires more than ordinary courage to suppress them. I speak from experience. Surely, between forty and fifty years almost constantly at sea, in the Royal Navy and merchant service, (having now commanded nearly twenty-five years,) should enable me in a good degree to judge of the best and safest modes of conducting this service.

I have been extremely fortunate, never having failed with the plans carried forward on board of my own ship for her internal regulation. I am called a strict disciplinarian, but I do not acknowledge being a promoter of tyranny or oppression, in any degree. I have made many long voyages, one in particular, nearly two years out, round the world, and was not at a civilized place during that time, yet my crew was in excellent order, without sickness or complaint; nor was I ever called before a court or a magistrate, on account of bad usage, or fault as a a commander. I hope, Sir, you and the readers of the *Nautical* will pardon my saying thus much of myself.

When a person is put into the command of a ship, he is supposed to be master of many circumstances, much of which a landsman must be entirely ignorant of; nor can he well be made to comprehend them, let his talents be of the highest order as a lawyer or otherwise; nor can he alone ever be a competent law-maker for the sea service, but must have the intelligent of our profession to assist in constructing an efficient code of laws. One of our ablest Judges, Abbot, has said, "The law has vested in a master of a ship great authority; the trust and confi-

dence necessarily reposed in him, should at once establish the necessity of granting full power to act."

Let this friend of ours learn all the bearings of a master's situation, and he will see that such a character does not stand in the light of others in ordinary circumstances. He has many great duties to perform which cannot come under any ordinary head, the lives of many persons depending entirely on his judgment, and having acknowledged the master's right to command them in all respects of their duty, both morally and physically, renders their situation different from any other on shore; the number of well educated, and respectable young men under their entire charge, with all their best interests, indeed the very bread of life of many respectable families in England depending on this person's worthiness. And should such a person not have power and authority to correct the unworthy part of his crew, when they deserve it? The unqualified manner this "Cautious friend" of ours has given his opinions upon this character, savours much of a mind disregarding the truth. Has he imagined that a knowledge of sailors can be gained intuitively? I would not allow that even passengers on board of a ship (mere landsmen) with all their eyes open to be able to judge of this service; they can but see it partially; but the minutiæ and near necessities of the service, they cannot know.

This writer should have consulted truer authority before he ventured his opinions upon the public. It is his opinion that few commanders are fit to be trusted on their own ground. I assert on the contrary, they will generally be found to judge and govern better to the purpose than most men considering their situations; their whole life is made up of obeying and commanding, and no people should understand it better.

If your correspondent were placed on the quarter deck in a dark winter's night, sleeting and blowing, upon a lee shore, with a coming storm and see the preparation and necessity for prompt obedience, he would then know how patience and feelings attuned to the dictates of humanity, would sit upon the necessarily active commander; he would find that the necessity for prompt obedience was so great, it would be foolish in the extreme to abridge his power in any degree, perhaps at the very critical moment, when a little acting beyond the common, might save the ship and lives of all on board. There is a rallying point sometimes which we must not stop short of, or all may be lost; there is a necessary grappling with our duties sometimes which nothing should check. I have seen a man turn round and tell an officer he would take his own time, even in an extremity; and I have known others studiously inactive in getting another top-sail up to replace one torn, upon a lee shore. Should we have been doing our duty, had we patiently submitted to such conduct, and allowed such men to deliberate upon the amount of activity they were to use; men who did not care if the ship were to go on shore the next moment? No! a rope's-end in such cases is of infinite service; they will not be so ready to "hang behind" in another emergency. Such men we often find among the crew; but certainly of the many we have no occasion to say even a word to.

I need not tell you, Sir, of those trying situations at sea, which

masters of ships are often placed in; it is for the information of such writers as our "Cautious friend," who will pertinaciously hold it to be better that the voyage should suffer, nay, the ship herself, than vest in the master on the high seas, due and full authority to carry on his arduous duties. There is no situation, with which rests so much responsibility on one head.

Our "Friend to the Sea Service," has said, "*If I was a master*, I should not feel very comfortable, because unqualified, I should mistrust my impartiality;" and he has the assurance to tell you, Sir, to depend upon it, that the Merchant Service would not be improved by such a concession being granted to it. Does he feel lurking in his own breast so much injustice that he might be excited to punish the innocent for the guilty. No man could do so, with feelings of common humanity. He surely has heard of masters on shore, having authority over their apprentices or scholars; and he cannot be aware that Judge Abbot has told the masters of the sea service that, "their authority over all the mariners on board, is that of a master over his apprentice or scholar, that he may lawfully correct them."

Our friend again asserts that the qualifications required for the command of a ship, do not necessarily constitute the person, a good judge of the mode of punishing subordinates; but by the very nature of their employments they should be the very best judges of the mode and extent of punishment to be given, as understood at sea; what other master or person on earth can require such prompt and implicit obedience. Let me tell landsmen, it is the very life of our sea service being able to force implicit obedience. It is a hard life for all, and requires severe rule. The master must be master in all things on board of ship upon the high seas; he must be judge, and magistrate for the time being. He is the life-guard of all on board, property to an immense amount, and life of immense value; can this be called an ordinary mastership? Is he not considered the nurse as it were for the navy, as the merchant service is styled the nursery? Is this a character to be so stripped of authority, so neglected and despised? No! let the Government be earnestly solicited to grant to the masters of this service fuller authority, and for the service a better understood code of laws, drawn up by experienced persons, accustomed to the demands of a sea-life, that justice may be rendered to all, that masters only should be appointed who are qualified to hold the situation; to be known by previous examination; of course it is a primary object to be gained, the respectability of the parties in the first place, and then the respectable footing. It is strange why landsmen should take it into their heads that they are better able to judge of this service than those who have spent a life in it, allowing talent to their side; they have done us an immense wrong, continuing to legislate for us in the fullest ignorance of our wants. It is said the same argument might be used by the community of doctors, of lawyers, or any other profession, but this will not hold good. We have a world of our own, and landsmen are not capable of acting a proper part in it. It is wonderful how little attention has been paid to professional legislation, the want of which, has done more injury to sailors than the boisterous winds, or the big waves, they manage so well to control.

It is generally allowed I say, that the merchant service is the nursery for our Royal Navy; but I can assure you, Sir, that the nursery is at this moment in a lamentable plight. All authority and our good old discipline seem to have taken flight, the reason of which is masters are afraid to do their duty; they seem to be quite paralyzed. The old Maritime laws have been so far interfered with, that a new construction has been given to many; whilst others have been rendered of non-effect, so much so, that many of our sailors are accounted little better than agents for the petty lawyers of London and Liverpool, against captains. What is to become of our navy, if the merchant service is thus allowed to become a nursery for insubordination and disorder? It cannot be expected that sailors will ever readily enter Her Majesty's service, where so much good order prevails, and wholesome restraint, leaving a life of licentious liberty to embrace a moral, and I would almost have said, a religious one comparatively. The whole moral character of our merchant service I say is suffering for want of judicious and efficient laws, and a want of examination of officers which must be established to save the service from utter ruin.

Our old men-of-war sailors now tell the youngsters of the merchant service, they have come to the wrong school. Such opinions are better calculated to controvert and shew how ridiculous the opposite opinions are, which our "Cautious friend" has urged so strongly, that extreme coercive measures should not be adopted in the merchant service. From such foolish opinions our sailors have learnt to turn round upon the officers and argue the case with them. So much of Mr. Easy will not do here any more than in a man-of-war. The winds and the waves are the same to the merchant service. The principle necessities of a sea-life are the same, and when this service is a little more assimilated to our navy in discipline and good order, by corrective measures, although it can never be expected to arrive at a point, even far below the proud and honourable point at which the royal navy of England has arrived, yet it may be made to bring out of the rough material, a sailor fit for the navy, trained to a wholesome discipline, and would undoubtedly level the step, making it more easy to enter Her Majesty's service,—at least the feeling against it, would be broken up.

I should have thought, that the mutinies which have taken place of late years would have opened the eyes of those, whose business it was to see this service taken care of. I could relate many circumstances of a disastrous nature in consequence of a want of authority in the merchant service, and if you will bear with me a little, I will relate an instance or two which came immediately under my notice, of the bad effect of a want of due authority and discipline.

The J——, not long ago was lying at a place where no other sailors could be got, her crew being in a mutinous state, that is to say so far, they refused to get the vessel under way, for several days, notwithstanding threats from the Captain, and trials of persuasion. He was at last driven to despair, armed himself, came to the windlass, and called the crew to their duty by name. The first who refused he shot dead on the spot. They then went to their duty. This dreadful alternative, I have no doubt, was in consequence of not, at the first moment of refusal, forcing them by a rope's end to go to their duty. Two only

had at first refused. This unfortunate captain was known to be a humane and an intelligent man.

Another case in the same part of the world came immediately under my notice. A valuable ship belonging to London, the C—, was quite in a mutinous state, the crew taking possession of the ship when they pleased. The Captain Y——, was either afraid to force the people to do their duty, or he thought his authority insufficient to punish them. I went on board to remonstrate with them, but they told me to go on board of my own ship, which was too much like a man-of-war for them; the ship at last sailed but never was heard of more!

Several other ships were at the same time in little better condition, and I had prohibited my officers and crew from all communication with them. I used strong measures to keep my crew in good order, and was under the necessity of punishing sometimes severely, and during a long voyage I did not fail once (using a strong hand) in bringing refractory people to a sense of their duty.

I have a case more to shew, what even a man-of-war may be brought to, for want of sufficient punishment. The T——, 80-gun ship, during last war was brought to such a bad state of discipline, as almost to be in a mutinous state. The captain was either afraid to punish according to the rules and customs of the service, or had feelings too much attuned to the dictates of humanity to do his duty. She became notorious for disorder and insubordination; she was called a privateer in discipline; the officers were laughed at by the people, and were no longer able to have the duties of the ship performed. The captain was compelled to leave the ship at last, and we were glad of the new appointment of a strict disciplinarian.

Lamentable as the case is, I assert that forgiveness is only an encouragement to more grievous outrages. This sagacious friend of ours says, "few cases can arise where the necessity for extreme coercion would supersede the good effect of a temperate but firm determination seasonably applied, to be obeyed in every lawful command."

Now, I have known this often to fail, and even the most temperate conduct in the master, with every good quality, lead to sad abuse and disorder. I am sure that every good commander will go along with me in contradicting this person's assertions, and acknowledging that my representations agree with their experience.

What would our friend do, by his determination, were he in charge of refractory sailors, in an extreme case, which often happens where they turn round and defy all necessary orders. I suppose he would let the masts, in the first place go over the side, and then make up his mind temperately to await the decision of a magistrate some 4,000 miles off. Could any such magistrate then be the best judge of the mode, or degree of punishment that such conduct would deserve? The commander who could be guilty of such folly should be no longer deemed worthy of command. The commander's determination ought to be a strict adherence to his duty, compelling all his crew to co-operate without the least reserve upon any pretence whatsoever,—and to show a refusal to be at their peril. Moderate correction for withholding services, under extreme circumstances, is too bland a term for what is necessary. Tampering and timid conduct here may lose the ship,

whilst a determined and fearless conduct unobstructed by inconsistent enactments, would save her. It would be indeed difficult to regulate the conduct of such a person, as our wisest Judge has intimated, but his duties ought to be religiously and morally performed, in obedience to the laws of God and his country. The relation between master and man, in this service, is totally different from any other, and must be clearly understood by our law-makers, that the laws given may be so plain and well defined, that each party may have no difficulty in understanding, or no chance of refuge upon the score of ignorance.

I am, &c.,

To the Editor, &c. P. P.

Dutch Expedition against Pirates.

By the following extract from the *Java Courant* of the 24th June, it will be seen that the Dutch Government have been very active against the pirates, and that their operations have been attended with success. A few such systematic efforts on the part of the Dutch and British Governments would go far to repress piracy in the Archipelago, and would soon leave the trade at a discount. The Dutch deserve great praise for the liberal scale on which the expedition was fitted out, and the manner in which the whole affair was carried through.—*Singapore.*

At the commencement of the present east monsoon, and by order of Government, a division of armed vessels, consisting of the steam boat Hekla, brig Postellon, schooners Zephyr and Egmond, moved from Sourabaya towards the eastern parts of Java, Bally, Lombock, Sumbawa, the Molucca Islands, and Celebes Sea.

This expedition, commanded by Captain J. A. F. Coertzen, was fitted out against the pirates in the Indian Seas, and on board of each of the abovenamed vessels was placed an officer and detachment of military.

Its object was in as far as possible to clear the seas of pirates by capturing, or annihilating their boats, and destroying the places in which they conceal themselves and their spoil.

Regarding the progress of this expedition, a report has been received from Captain Coertzen, dated East-end of Celebes, 11th instant, from which it appears, that it had the good fortune to annihilate and destroy two of the pirates' hiding places on the S.E. of Salayen, with 34 Mangendanoos and Tabellosezen pirate boats. Further in the straits of Boni Ratti, after a sharp, through hopeless fight, with 17 Mangendanoos pirate boats, two were captured and burned, each of them carrying 15 guns and more than 100 men. An easterly breeze, which sprung up in the fall of the evening, enabled the other boats to make off, and prevented their being again brought under fire.

Altogether the expedition had captured 40 guns, destroyed 36 boats, several of which were 65 to 70 feet long, and laid in ashes two of their nests.

The expedition had to lament the loss of 3 killed and 20 wounded.

On the Mariners' Compass.—*By Mr W. Walker, Master R.N.*

(Continued from p. 791 vol. for 1843.)

When Mr. Norman "the compass maker" discovered in the year 1580, the tendency a magnetic needle had to dip, and depart from the horizontal position, as balanced by him, previous to the needle being magnetised, he found it necessary to add a weight to the south arm of the needle to restore the card to its equilibrium. He made the first dipping needle, but it never occurred to him that by adding a weight to the south semicircle of his steering compass cards, he was adding to the errors of the Mariners' Compass! Strange to say, the practice has been continued up to the present time! Philosophers too, have lent their sanction to ancient practice, so that the compass has been actually made mechanically incorrect, by erroneous views being taken of the philosophy of its mechanism.

We are taught to believe that all heavy bodies tend, or gravitate in a direction perpendicularly downwards, to the earth's centre, and that all ponderous bodies when suspended by a string or supported on a pivot will have their centres of gravity directly under the point of suspension; that is to say, the point of suspension, and centre of gravity will be in the same vertical direction!

This opinion is fallacious! It is only true of bodies that are not magnetic. A magnetic needle when freely suspended on a point or pivot, has its *centre of gravity drawn from beneath its point of support in all magnetic latitudes*, and hence a compass needle with the card and cap attached to it, may be regarded in a constant state of mechanical instability, unless it be at the magnetic equator where the needle has no tendency to dip.

When a plain unmagnetised steel needle is fitted to its cap and card, and placed upon its pivot in the compass bowl, its centre of gravity will necessarily be directly under its point of support, because gravity is the only force acting upon it; if all its opposite parts be similar and equal the card will be perfectly horizontal. Let the needle be magnetised, and a new force is introduced; the north end of the needle dips or points downwards, and the south point of the needle is elevated, and consequently the centre of gravity of the card has changed its relative position with the point of suspension. The magnetism has brought about this change without adding any weight to the needle; the north point of the needle is attracted downwards by the earth's magnetism, and the south point is repelled upwards by terrestial magnetism. The usual means adopted to remedy this deflection of the compass needle is to fix sliding weights of brass to the needle, to restore the card to a level and thus make the card *apparently* in equilibrium.

In order to make my meaning more clear, let the following figures represent sections of a common compass needle, with its card and cap resting upon the pivot; first, when properly balanced, then magnetised, and finally re-adjusted by a weight.

Fig. 1.

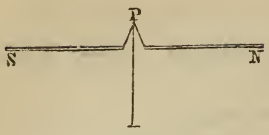


Fig. 1 is the card devoid of magnetism; by the laws of mechanics, its centre of gravity and point of suspension, in the agate P, are in the same vertical.

Flg. 2.

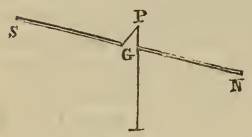


Fig. 2 is the same needle after being magnetised, and dipping towards the north; its centre of gravity G is now drawn from under the point of suspension; it is now to the southward of a perpendicular let fall from its point of suspension at P.

Fig. 3.

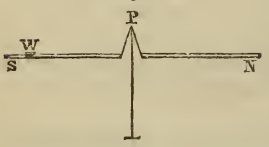


Fig. 3 is the same card restored to its horizontal level by means of the weight W fastened to the needle near its south point, which weight *apparently* restores the needle to its equilibrium, but in reality determines the mechanical centre of gravity of the mass to be *nearer to the south* than the north point of the needle. It is a self-evident fact that the south part of the card is made *heavier* than the opposite part; and, therefore, their common centre of gravity is not in the same vertical, with the point of suspension P, although it may appear to be so. The south arm of the needle is actually made heavier than the north arm by the weight W, and this is the condition in which all ships' steering-compasses are made up to the present time. The Mariners' Compass then is an imperfect instrument, in a state of constant instability, by reason of the conflicting forces of gravity and magnetism; yet no inconvenience arises in its use, *in fine weather and smooth water*. But when the sea runs high, and the ship is rolling or plunging about among the waves, the compass, which is always fixed at a considerable height above the ship's *axis of rotation*, is carried backward, forward, and in every direction through the air, at the rate of 20 or 30 feet per second. Matter by its inertia resists any change endeavoured to be made in its state, whether of rest or of motion. This is admitted on all sides, although doubts have been entertained about the amount or quantity of force required to put a body of a given weight in motion, or when moving with a given velocity to stop it. Some have maintained that the moment of inertia or rather the momentum of a body in motion is as the simple velocity, whilst others have contended that the force of a body in motion must be proportional to the square of the velocity with which it moves.

It appears to me that every effect produced must necessarily be proportional to the cause of that effect, and that when a body is in motion we must take into consideration the quantity of matter in the body, and the velocity with which it moves.

Now the force arising from the quantity of matter in the body, must necessarily be proportional to the quantity of matter, and the force arising from the velocity of the motion (as a cause) is necessarily proportional to the velocity of the motion. The whole force then, arising

from the quantity of matter, and the velocity of its motion must be proportional to these two causes taken together, and therefore in bodies of equal weight, having equal quantities of matter and moving with equal velocities their momenta will be equal.

If the force of a ponderous body in motion were as the *square of its velocity*, then would a cannon ball of 24 pounds, when moving with a velocity of 100 feet in a second, be arrested in its flight by coming in collision with a ball of only 6 pounds, and moving in an opposite direction with a velocity of 200 feet in a second! We know, experimentally, that it would require a bullet of 12 pounds in weight, and moving with a velocity of 200 feet in a second to stop it! To imagine that the motive force of a body of a given weight, when moving with a given velocity, is as the *square* of that velocity, is to imagine that the force which arises from the velocity is equal to the square of itself!

If this reasoning cannot be controverted, it is useless to suppose that any arrangement of sliding weights upon the needle of a steering-compass, whether they be placed nearer to or farther from the point of suspension, can be made to balance the card on a level, and at the same time make the inertia of the opposite semi-circles of the card perfectly equal under all circumstances.

If our reasoning be applied to a compass card with an unmagnetised needle, mounted on its pivot in the usual way, in a compass bowl, its centre of gravity will be in the same vertical as its point of suspension; all its parts will be in equilibrium by the force of gravity, and although the card might vibrate by reason of its pendulous centre of gravity when put in motion, yet there would be no tendency in the card to oscillate or swing in a horizontal plane, because the inertia of all its opposite parts would be equal, and the centre of its inertia would be in the same vertical line as the point of support; in a word, there is no reason or cause why the card should not remain on its pivot without turning round or oscillating upon it.

Let now, the needle receive the magnetic touch; the needle arranges itself in the direction of the magnetic meridian, the needle dips, and drives the common centre of gravity of the card to the southward of its point of suspension, there is now a greater quantity of matter to the southward than there is to the northward of the pivot's point; and, if we put the compass in motion alternately in an east and west direction, the south semi-circle of the card *lags behind*, by reason of its superior weight; and, if we bring it suddenly to rest, the south part of the card *goes on* by reason of its momentum being greater than that of the opposite semi-circle,—the directive force of the magnetised needle striving to get the mastery of the disturbing mechanical force arising from gravity, and the unsupported position of the common centre of gravity of the card and its appurtenances.

In high magnetic latitudes where the dip is great, the Mariners' Compass, in its present construction, must be regarded as a very imperfect instrument, by reason of the disturbing forces that exist between gravity and magnetism. Gravity acts in a line perpendicularly downwards, but magnetism acts in a line parallel to the direction of the magnetic dip, and varies in different latitudes from a horizontal direction, at the magnetic equator, to the vertical one at the magnetic poles.

When a compass needle is but slightly magnetic and the card is comparatively heavy, such a compass will be very sluggish in smooth water, but tolerably steady in stormy weather; but if the card be a light one, and its needle a powerful magnet, then will the compass be sensitive and serviceable in smooth water, and fine weather, but unsteady and of little use in a storm. The reasons are obvious enough; a weak magnetism in a heavy card but slightly deflects the centre of gravity from its point of support, whereas a powerful magnetism in a light card has the effect of deflecting the centre of gravity very considerably, and consequently the momenta of inertia in the opposite parts of the card must be very unequal, when the ship rolls heavily in high magnetic latitudes, and is steering a course near the direction of the magnetic north or south points of the compass.

All kinds of plans have been tried to diminish this oscillation of sea compasses. Extra gimbals have been applied, cards have been placed in rectified spirits of wine, heavy weights have been added, compass cards have been mounted on their pivots like toad-stools on their stalks, and supported by metal braces like a lady's *parasol*, or a gentleman's *parapluie*; *chain cables* have actually been shackled on to the lower side of compass needles, in order that the ends of the chains might drag about in the compass bowl, and as it were moor the needle in the direction of the ship's course! *Of course* all these patent contrivances were of no practical utility. How could they? Can the physician cure the malady without knowing something of the nature of the patient's disease?

We have now shown that the Mariners' Compass, in its ordinary construction, is an imperfect instrument, and we have explained the nature of its imperfection; we have also shown in what way, the induced magnetism of a ship's iron acts upon the compass. It remains to be shown how the Mariners' Compass, itself, may be rectified, and how the magnetism of a ship's iron may be cut off from acting upon the compass, by means of the same kind of materials that disturb it in different magnetic latitudes, and not by permanent magnets!!

I stated in a former part of our subject that an efficient compass should possess a great magnetic energy with small weight, and friction on the point of suspension, and the reader will have noticed that these conditions appear to be incompatible; they may, however, be united in the same compass. A small magnetic needle is comparatively more powerful than a large one, consequently there is some sized needle better than any other size, for if we go on to augment the quantity of steel the ratio of the weight to the magnetism will increase; and if we make the needle too small, the ratio of the directive power of the needle to the weight of the card it has to carry will be too small. Now, I have concluded that in a steering compass, the needle with its card and cap complete, should not weigh more than 1000 grains, nor less than 800; that of this quantity the card should be made as light as possible, and that the magnetic energy of the needle should be of a permanent nature; made so, by hardening the steel needle, and that a test of its magnetism should be the *lifting* and *suspending*, by its magnetism of a card and needle similar to itself.

The mica of the card should be sound, thin, and uniformly covered

with thin paper, cemented to it, and varnished. The cap should be jewelled and fixed perpendicular to the plane of the card. The needle should be firmly secured under the card in the usual way, but all sliding weights and unnecessary matter dispensed with; the whole should be made in perfect equilibrium with the plane of the card perfectly horizontal. When the point of suspension, centre of gravity, and centre of percussion are in the same straight line and perpendicular to the plane of the card, all these conditions must be secured *before any magnetism is communicated to the needle.* The operation, requires great care and correctness, no part of the card must be heavier than another, it must be found *experimentally* to be in perfect equilibrium. A *compensation regulator* is required to be fixed to the under side of the needle, directly below the point of suspension, made moveable, and secured like the compensation weights on the balance of a chronometer; through this regulating compensator the spindle of the compass card must pass, and up to the ruby in the cap, which must be centred and polished to receive the point of the vertical pivot.

When these preliminary operations are performed, the card should be placed upon its pivot and held in a slanting direction to ascertain if it be in equilibrium in all kinds of positions, in fact, that all its parts be equally heavy. When this is done, by gravity only, the momenta of all its opposite parts will be found equal, and therefore there can be no tendency in the card to turn round on its pivot by any change of horizontal motion of the vessel. The needle will also be prevented from vibrating, and when finally magnetised, the only force that can act upon it, will be the horizontal and directive magnetic force; the needle cannot dip because the pivot passing through the compensation collar, prevents the dip, and keeps the common centre of gravity directly under the point of suspension, and preserves the stability of the instrument. There cannot be any other force acting upon the needle than that of magnetism, namely, the terrestial and directive magnetism, exerted upon the needle by the world, and the induced magnetism of the ship's iron, which has been discussed in a former part of this paper.

We see then, that the philosophy of the Mariner's Compass is mainly limited to the needle, and its mode of suspension. There is as much difference between a common and a rectified compass, as there is between a common watch and a chronometer. There are very very few compass-makers that know anything about their business. These important and most useful of all nautical machines, must henceforth be finished by a superior class of workmen.

The compensation regulator on the under side of the needle, may either be fastened to the needle itself, or to the under side of the ordinary cap, the hole through which it passes may either be circular or square, in either case the friction will be not greater than $\frac{1}{100}$th of the friction at the point of suspension, when the magnetic dip is 70 degrees, and when the dip vanishes the friction in the compensator will vanish also. We have said that the aperture in the compensation may either be round or square. It should be a *hair's breadth* greater than the diameter of the pivot, and polished. It will be evident to every person conversant with mechanics, that a cylindrical spindle will meet with less friction by working in a square hole than in a circular one!

We now proceed to describe the mode of suspension of the card in the compass boxes now in use; for every kind of compass *now in use*, may have new cards fitted to it, and be made an efficient instrument for all kinds of weather. The most common way of mounting a compass card is simply to place it upon the top of a pivot which rises vertically from the bottom of the compass bowl,—the bowl being slung in gimbals to preserve it in a horizontal position. The card thus suspended on the agate of its cap is free to vibrate in any direction, to traverse by magnetism, or to oscillate horizontally by mechanical or magnetic action; since the centre of gravity of the mass, as has been shewn, will always be on that side of the pivot which is opposite to the end of the needle that dips. The vibrations of the needle cause the centre of gravity to describe a series of lines, and the horizontal oscillations of the needle compel the centre of gravity to describe a series of curves about its pivot of support. It is evident that the friction and weight of the card thus suspended must act upon the *side*, and not exactly upon the point of the pivot.

Instead of suspending the card immediately upon the ordinary vertical spindle rising from the bottom of the compass bowl, I place a cone of brass with its apex made to receive the vertical pivot upon which it is made to traverse, and being hardened and highly polished. Upon the top of the brass cone, the pivot made to receive the rectified card is firmly screwed in the direction of the axis of the cone, so that the spindle in the bottom of the compass bowl, and that upon the top of the cone shall be in the same strait line. The card being fixed on its pivot, the weight of the cone serves as a counterpoise to the weight of the needle.

Let us now examine the conditions of this arrangement. The cone being of brass, or other compound metal, will be devoid of permanent magnetism, and being suspended on a fine steel point, it will act in every respect as an additional pair of gimbals to the compass; being at perfect liberty to traverse on its point of support it promotes the free action of the card above it,—acting, if I may so say, as a friction roller to the axis upon which the needle traverses. This mode of double suspension whilst it promotes the free action of the needle to persevere in its magnetic meridianal direction, when the direction of the ship's course varies, the double suspension reduces the number of vibrations and their angles of deflection, when the needle is deflected from its meridian. The cone is not a magnetic body, and its centre of gravity is directly under its point of suspension. Now, if a rotatory motion be communicated to the cone, it will have a tendency to go on in the same direction by reason of its inertia. But, if the needle mounted upon its pivot above the cone, be deflected by a magnet, say 90 degrees from its magnetic meridian and then set free, the cone will, to a certain extent, revolve on *its* pivot, in the same direction as the needle, but the magnetism of the needle brings it *back*, whilst the cone has a tendency to *go on*; the cone, therefore, exerts a force to retard the oscillations of the needle. I found, experimentally, that a compass card, by single suspension made twelve vibrations when deflected 90 degrees from its meridian, and when the cone under it was set free, the vibrations were reduced to six when deflected as before.

A committee was appointed by the Lords of the Admiralty "for the improvement of ship's compasses." This committee introduced a new set of instruments of a superior and costly description; every possible care and attention was bestowed upon these compasses and the cost of each standard compass according to the "navy estimates" was £25 each! The cards are suspended on a ruby in the top of the cap, and some of the cards have *eight* powerful magnetic needles laid parallel to each other, and placed with their edges downwards. Here we have a single friction, a single card of a light and elegant description, with eight powerful magnets beneath it. The common centre of gravity of these needles is necessarily at a considerable distance below the point of suspension, by reason of the needles having their *edges* vertical instead of horizontal. These powerful compasses are "tremblingly alive" to all magnetic agency, and on shore are accurate and useful beyond all former comparison! At sea in fine weather and smooth water, they have been reported as "invaluable," but in running before the wind with a heavy sea during a *gale*, "they were found to be *useless;* and had there been none others on board, the ship must have been brought to the wind and steadied to ascertain any bearing." The compass committee in directing these powerful compasses to be made, overlooked the circumstance, that by increasing the magnetism in an eight fold ratio, they increased the dipping tendency of the machine, and that by lowering the centre of gravity, the magnetism of the eight needles would trip their common centre of inertia on one side of their common pivot of support; in a word that the accumulated magnetism of these compasses united under a single card would make a more sensitive and a better compass for fine weather and smooth water, than ever was produced before, but for storms and tempests at sea when good compasses are most required, the improved compasses would prove defective or inefficient!

Having been directed to fit a compensation regulator to the under side of one of the standard compass cards, having eight needles under it, I deprived these needles of their magnetism, and adjusted the *matter of the card*, so that the plane of the card was made to be horizontal, and the vertical spindle to pass through the point of percussion, centre of gravity, and point of suspension in a line perpendicular to the plane of the card; in a word, the material particles composing the card and its appurtenances were in perfect equilibrium around the pivot upon which it was intended to traverse.* The compensator being now firmly fixed, the needles were re-magnetised, and the following comparative experiments were made with an un-rectified but otherwise a similar card:—

The compass and its card, mounted in the usual way, on being carried about and rather roughly handled, by being made to imitate the motion of a vessel, diverged from its meridian 80 or 90 degrees (by reason of the unequal weight of the opposite parts of the card) and came to rest on its meridian after a lapse of 200 seconds of time; whereas the rec-

* These mechanical arrangements were made by Mr. E. J. Dent, F.R.A.S., of 82, Strand, London, Chronometer and Clock Maker in Ordinary to Her Majesty. Mr. Dent, made the alterations under my superintendence, and thoroughly understands their nature and importance.

tified card when submitted to similar treatment and similar deflection, diverged from its meridian about 6 or 8 degrees, and settled on its meridian after 20 seconds of time. Now, in the first case the magnetism of the needles interfered with their gravity, but in the second case these disturbing forces were separated, and the directive force alone acted upon the needles and compelled them to adhere to their meridianal direction.

Two of the ordinary binnacle steering compasses, were procured from Woolwich Dockyard, by order of the Board of Admiralty. The needles of these compasses although found to be of steel, were so badly tempered that much of their magnetism had departed from them. They were properly hardened and found after being re-magnetised to have acquired additional power. One of these needles was refixed to its proper card with its bars and *balance weights*; and the other needle was fixed to its card from which the brass bar and balance weights were removed, and a compensation regulator *added*. The card, &c., having been adjusted in perfect equilibrium upon its pivot, and a double suspension fitted in the way I have described. The magnetic energy of these needles was such as to support, by magnetic attraction, their respective weights, that is to say, the north pole of one needle being applied to the south pole of the other it readily raised it, and held it by suspension.

The cards were now mounted in their respective bowls, and the following comparative results were obtained, similar pivots being used.

Common card, single needle, deflected 135°	made	51	oscillations in	458	seconds
Rectified card, " " "	"	15	"	134	"
Ditto by the double suspension "	"	8	"	60	"

The following trials were made at the Admiralty, on the 24th of January, when the needles of the respective compasses were deflected 90 degrees from their meridians, and the number of vibrations counted before they came to rest.

A standard compass of the first order with 8 needles	made 21	oscillations.
A rectified card of the same kind, in the same box 8 needles	8	"
A do. steering card, 1 needle, single suspension	12	"
The same card, *double suspension* . . .	6	"

The standard compass came to its meridian within ½ degree; and the steering compas ⅛th point in a quiet room in the Admiralty.

It appears then, from these experiments that when we prevent the magnetism of the compass-needle from deranging the centre of gravity of the card, in the way we have shown, we cut off all tendency in the needle to depart from its meridian. We prevent any mechanical tendency in the card to a rotatory or oscillatory motion, and we compel the needle to obey the only force we wish to act upon it, namely, the horizontal magnetic and directive force, which the earth's magnetism exerts upon the needle to keep it in the direction of the magnetic meridian, and thereby enable the mariner to see by his compass, whenever the direction of the ship's keel diverges from the course he is ordered to steer.

A certain number of compasses, rectified in the way described, have

now to undergo comparative trials *at sea*. The principles we have propounded are neither hypothetical nor visionary; they are founded on facts, and it does not require the mesmeric gift of "*Clair voyance*" to predict that at no very distant period of time, *all sea compasses* will be made on the principles I have shown to be correct. It is not in the binnacle, the compass box, or compass bowl, where the mechanical philosophy of the Mariners' Compass is to be found. We must look for it in the *magnetic needle*, the *card*, and its *mode of suspension* under the glass cover of the compass. It will, however, be impossible for the ordinary compass-makers to produce correct instruments. It requires more skill in magnetism, and of the laws of mechanics, than these workmen generally possess, to make a perfect compass. It unfortunately happens that the magnetism of a compass will actually *disguise the errors of workmanship*, or of adjustment, for we can only ascertain, and by trial before any magnetism is given to the needle, whether the card be in perfect equilibrium upon its pivot or not.

Let then, the Mariners' Compass assume that rank among scientific and useful machines to which it is so well entitled. Let garret workmen, and shipchandlers, resign the more philosophical part of the compass, to be made by delicate and correct workmen, in order that the navigator may have the benefit of a correct and trustworthy guide to direct his vessel through a "pathless ocean."

(To be continued.)

ON THE DAMAGE WHICH HAS OCCURRED IN THE BRITISH NAVY BY LIGHTNING, *with an account of the attendant phenomena, abstracted from the Official Journals of the respective Ships, and from other authentic sources of information.—By W. S. Harris, F.R.S., &c.*

(Concluded from page 32.)

ARMADA, 74, Plymouth Ordinary.

1842. February 27th, the ship jury rigged; 9h. 30m. A.M., a heavy shock of thunder and lightning fell on the fore-top-gallant-mast and splintered the mast a little above the rigging; it passed by the chains attached to the guest warp boom into the sea and over the chain bridle, filling the ship with smoke, and producing great agitation in the water where it struck.

The wind had been northerly and westerly on the previous day; 27th, 2 A.M., a south-west gale, about the time the ship was struck, it flew suddenly to the north-west in a heavy squall with hail and sleet, thunder and lightning; 10h. 30m. south-west again, after which west and north-west, strong gales with showers and lightning occasionally.

The ship had not any lightning conductors, but many others in the

Ordinary, and near the Armada had the common copper-linked-chain, usually supplied to the navy, led down from pointed spindles fixed to the head of the masts.

ÆTNA 8. Bomb Ship.

1830. January 5th, Corfu Channel, Mediterranean; 8 P.M., moderate breezes N.N.W., with lightning, thunder, and heavy rain. The electrical discharge burst over the forecastle, and one of the Marine Artillery was struck down and much hurt. It descended to all appearance like a rocket or shell, and exploded close to the fore-mast about twelve feet above the forecastle, with a terrific noise, without injuring the mast; all the men on the forecastle, were stunned or knocked down by it.

The ship had the common chain conductor at the main, which was too short to reach the water by six feet. The electrical discharge struck upon it several times and terminated at its extremity by loud explosions, one of which "shivered the upper glazed half port near it. See report of Commission on lightning conductors, p. 87.

The ship had only one chain conductor on the main-mast, and not any on the fore-mast as has been supposed. Many parts of the chain exhibited marks of fusion especially at the junction of the links, some of which were nearly if not wholly separated. The ship was at the time shortening sail previously to coming to an anchor in company with Madagascar and Musquito, as already mentioned.—See Madagascar.

The wind had been on the previous days southerly and easterly, moderate and fine. At the time of the lightning it had been variable and shifted to N.N.W., after which it veered to the east, by N.W. and E.N.E., and finally by this ship's log terminated at S.E., at midnight of the 27th. The next day it again went round to W.N.W., N.N.W., N.W., N.N.E. and N.W., cloudy with rain; and ended at N.W., at midnight fresh breezes and fine.

BELLETTE 18.

1825. May 24th, West Indies, at sea; P.M. squally with thunder and lightning, wind easterly with a shift to W.S.W.; 5h. 30m. struck by lightning, which split the main-top-gallant-mast, splintered main-top-mast, and slightly wounded five men.

The wind on the previous day had been from E.S.E. to E.N.E. with occasional calms; on the 24th, E. and E.b.N. moderate and fine A.M; P.M. moderate and cloudy, after which the wind became variable and squally, and about 5 P.M. shifted to W.S.W., after the lightning it again became variable and flew back to E.N.E. and E. where it remained.

Capt. Leath, who commanded the ship, has been so good as to furnish the author with a highly interesting notice of this storm. Previously to the lightning the weather was unusually oppressive, and the darkness most intense, the wind shifting suddenly many points in small squalls. The rain fell in torrents approaching in heaviness to a water-spout; due precautions were accordingly taken in furling the sails, &c.,

and every one looked anxiously to where the clouds would burst and send forth their lightnings; all at once the wind died away, and a terrible burst of thunder and lightning ensued immediately over the vessel. Some curious effects were observed as the lightning shot toward the earth, it caused a noise similar to the whizzing of musket balls. Again a breeze sprang up from the opposite quarter to the last direction of the wind, so that it became necessary to brace round the head yards. At this instant a discharge of lightning with thunder struck the ship, shivered the upper spars, and struck down the thirty-six men who were hauling in the head braces, five of whom were seriously injured. The main-mast escaped damage. A portion of the charge found its way by a bell wire into the captain's cabin, and upset every thing in it. The only other mark of its progress was on the cook's funnel, which was covered with yellow spots, and looked in other respects as if it had been scoured. The smell of sulphur between decks was very intense.

Doris 36.

1808. September 8th, moored in Kedgeree Roads, lat. 21° 32′ N., long. 88° 24′ E.; P.M. cloudy; 8h. dark and cloudy, with thunder, lightning, and rain; 8h. 20m. the lightning struck with a dreadful explosion upon the main-top-gallant-mast, shivered and splintered it, together with the main-top-mast, and damaged the main-mast in several places.

The wind on the previous day had been southerly, moderate and fine; on the 8th A.M. variable, with hot sultry cloudy weather at noon; P.M. a shift of wind to the north, which again changed to S.S.E.; on the succeeding day dark and cloudy, with heavy rain and variable winds.

Elk, 10.

1814. July 22nd, lat. 29° 40′ S., long. 35° 21′ E., A.M. fresh gales and squally, heavy lightning with rain; 6h. 30m. foremast struck with lightning which splintered the mast and wounded four men.

The wind on the 20th A.M. S.W., and S.S.W., light breezes and clear; at mid-day a shift to the N.E., light airs and fine; at 1h. P.M. E.S.E.; at 7h. East then E.N.E.; 21st A.M., fresh breezes S.b.E. then south; 4h. A.M. East then E.N.E., and N.E; at 12h. N.N.E. strong breezes; P.M. fresh gales and clear N.E.b.N.; after which squally with thunder and lightning; 22nd, a shift at mid-day to N.W. after the lightning at 1h. 30m. P.M. a sudden shift to S.W., in a sort of whirlwind which took the ship all aback, and nearly swamped her over the stern; 23rd, dark squally weather, wind varying from S.W. to S.S.E.; P.M. calm and cloudy, after which a heavy squall from north-west.

The electrical discharge fell on the head of fore-top-mast and burned the eyes of the rigging about the mast-head, which appeared as if seared with a red hot iron. The fore-mast was so shaken as to require strong wouldings and fishes; still whenever the head yards were hauled it rattled like a bundle of laths. The discharge, after shaking the fore-mast, passed over the forecastle deck into the sea. Two of the men injured lost the use of their limbs.

The author is indebted to Mr. Gowdy, the master, for further details of this case.

The lightning conductor was got up to the main-mast after the accident.

Galatea 44.

1805. July 7th, standing toward Prince Rupert Bay, Dominica; P.M. moderate breezes and sultry weather; 1h. 30m. squally and thick with rain; heavy clap of thunder and lightning struck the ship, and shivered the fore-top-mast and top-gallant-mast, so as to render them useless; it also shook the fore-mast severely, and did other damages. Wind easterly and variable.

NB.—This is from the master's log. The log of this ship before given in *Nautical Magazine*, p. 537, vol. for 1843, is very meagre and unsatisfactory, and does not state what damage the spars sustained.

The ship appears to have been very severely dealt with by the lightning; the fore-mast was evidently disabled, and they appear to have been for some days repairing the effects of the shock. The log, however, does not give particulars.

The wind still hung to the east after the lightning.

Gorgon. Steam Frigate.

1840. December 11th, at anchor in Marmorice Bay, Mediterranean; 3h. 40m. A.M. lightning rent the main-top-mast.

The winds on the 9th had been from S.E. to S.S.W., on the previous day it became variable with calms; on the 11th, variable from N.W. to S.E.; on the 12th, N.N.W. variable and calm; after which it again shifted to S.E. and S.

The electrical discharge appears to have entered the top-mast by the the sheave hole for the top-sail halliard, leaving a round hole as if bored by an auger. The interior of the mast resembled a bundle of matches, it was so completely shook. The discharge, after shivering the mast, is supposed to have passed off by the chain rigging.

Lavinia 44.

1807. May 6th, Vigo Bay; wind S.S.W., heavy squalls; 4 A.M. observed the main-mast slightly burnt by lightning.

The wind on the previous day had been south-west, squally with rain and lightning; on the 6th it veered to S.S.W., and became variable, after which it flew back to N.N.W., in a heavy squall with rain.

La Loire 38.

1809. January 2nd, moored in Cadiz Bay; 10 A.M. squally with lightning; 10h. 30m. the lightning struck the main-mast, and wounded one man.

The wind had been on the 31st December S.S.W., fresh breezes and cloudy; on January 1st S.W., with strong gales and heavy rain; on the 2nd S.b.W., with a shift to N.W.; on the 3rd moderate wind S.S.E.

They had loosed sails to dry; but a squall set in from north-west they were clewed up, and the men got down as soon as possible.

The gunner states that he saw a fire-ball strike from the mast out of the scupper.

The main-mast was surveyed, and found still serviceable.

Leviathan, 74.

1812. October 9th, Gulf of Lyons; lat. 42° 35′ N., about ten leagues from the land; 12h. 30m. P.M. main-top-mast struck by lightning which descended down the main-mast. The top-mast was rent with the grain down to the main cap; the main-mast also felt the effects of it; but so far as can be discovered is not greatly damaged.

The wind on the previous day had been from the south and south-east, moderate and cloudy; on the 9th, A.M., dark cloudy weather with rain and variable easterly winds, and lightning in south-west; 3h. 30m. heavy squalls with thunder and rain, wind easterly; 4h. lightning thunder and rain continued; 9h. cloudy and black; 11h. taken all aback from south-west, heavy rain thunder and lightning; P.M. ditto weather, ship struck by lightning; 4h. thick with distant thunder, wind south-east, then east; 10h. P.M. light airs from the eastward. The next day moderate with rain and variable winds and distant lightning, the wind appears in this case to have again gone back to the eastward.

Milford 74.

1824. January 23rd, in Ordinary at Plymouth; 6 A.M. heavy squall with rain from N.N.W., with vivid lightning and thunder. The electrical discharge struck and shivered the jury main-top-mast; and shattered the jury main-mast; and then taking its course through the waist to the larboard side of main deck, seemed to evaporate there in a pool of water, with a loud explosion, without doing any further damage; but leaving a strong smell of sulphur in the ship.

The wind on the previous days had been westerly; on the 22nd variable easterly, gale at night from S.W., which veered to N.W. and N.N.W. in heavy squalls with rain.

This ship had not her lightning conductors up in common with the other ships in the Ordinary, they had been removed on the previous evening preparatory to some repairs to the ship.

The Caledonia, a first-rate, in Ordinary, with lightning conductors up from the lower masts, was lying about 80 fathoms from the Milford, but received no injury. Several other ships with conductors were in the vicinity, together with a powder magazine on the shore, lying in the direction from which the thunder squall proceeded; but, on these the cloud did not explode.

Pompee, 74.

1812. October 11th, Gulf of Lyons; lat. 42° 23′ N., long. 5° 30 W.; A.M. variable winds and moderate with rain; 3h. 30m, squally, main-top-gallant-mast shook all in pieces by lightning, fore and main-

top-masts also badly damaged. Thomas Williams, seaman, killed, and James Brown burned by the lightning; shifted main-top-mast, &c.

The weather on the previous day had been calm with lightning, rain, and thunder; on the 11th variable winds, on the succeeding day wind westerly with light breezes and cloudy.

Resistance, 44.

1794. November 16th, at anchor North harbour, Balambangan, lat. 7° 46′ N.; P.M. E.S.E. squally with rain; 1h. A.M., 17th N.E., squally with heavy rain and lightning; 5h. 15m. the lightning struck the ship and shivered the main-top-gallant-mast and main-top-mast in pieces, and badly damaged the main-mast. On examining the main-mast found it shivered in many places.

The wind on the 14th and 15th, had been westerly, from N.W. to S.W. with light breezes; on the 16th, a shift to E.S.E., and N.E., with hard rain and squalls.

Revolutionaire 44.

1815. March 31st, moored in Moira Roads, East Indies; P.M. fresh breezes and variable weather, with heavy rain; 3h. thunder and lightning. The lightning struck the main-mast, shivered the lower mast and destroyed the top-mast and top-gallant-mast.

The wind for the three previous days had been very variable, with occasional calms. At the time the lightning struck the ship it veered about in sudden shifts from N. to S.E., accompanied by heavy rain; after the thunder and lightning it settled to the east, with cloudy dark weather.

The ship had a new main-mast at Manila on the 5th of May following.

Redwing, 18.

1819. August 12th, Algoa Bay, south coast of Africa, at anchor; 8h. P.M. variable wind with strong lightning, and heavy rain; 9h. 10m. the ship was struck by lightning forward, which shivered the following; viz., fore-top-gallant and royal-mast, fore-top-mast, two studding-sail-booms, top-mast-cap and cross-trees, fore-top-gallant-yard and sail with various ropes and blocks; heavy squalls from south-east; veered to a whole cable, &c.

The wind had been variable, light breezes and cloudy, and the ship was towed into the anchorage and anchored at 4h. A.M. Wind at sunset north-west with rain, after which a shift to south-east with a heavy gale; on the 13th moderate with variable winds; 14th, squally from the north-west.

The electrical discharge is said to have struck the chain cable. The second lieutenant who was knocked down, saw it run over the chain close to the water. It is supposed to have passed into the ship this way, but this was probably its point of exit, as all discharges of lightning are momentary; the canvassing on the top-gallant-yard was burned through three skins; the fore-top-mast was shivered in atoms, the pieces falling in all directions on deck.

Squirrel 28.

1791. December 26th, Beerhaven, single anchor; P.M. hard squalls of wind and rain with thunder and lightning, W.N.W. and N.W.; let the sheet anchor go under foot; 7 P.M. a ball of lightning struck the main-mast, which burned one side of the mast, and split a piece out of fore side; A.M. more moderate.

The weather had been squally on the previous day from W.N.W., with strong gales on the day succeeding the accident, viz. 27th; it shifted from N.W. to S.E. in the course of the afternoon.

The log does not say much about this case, and appears to have been not kept with very especial care. In one of the logs of the ship the circumstance is not noted at all.

The main-mast, by other accounts, appears to have been perforated by the electrical discharge, about two-thirds up from the deck. The lieutenant of the watch and several men were struck down. The noise of the thunder is said to have resembled the firing of one of the fore-castle guns, and a strong sulphureous smell pervading the ship.

The perforation extended into the mast about one-third its diameter. The ship was moored under very high land.

San Josef, 120.

1803. December 11th, English Channel, lat. 48° 57′; P.M. strong breezes and squally, with hard rain, wind variable; A.M. 12h. 30m. heavy rain, with thunder, and lightning; the main-mast was struck by the lightning and slightly injured.

The log says very little of this case. It appears however that the carpenters of H.M. ships Dreadnought and Royal Sovereign came on board and found the mast so damaged that they were obliged to fish and would it. The ship went into Plymouth in January following, the mast on being taken out was found shook into the heart like a bundle of laths, and remained for some time for exhibition in the Dockyard as a curious instance of the action of lightning. It was considered wonderful that it stood so long after the accident.

The electrical discharge fell on the ship obliquely, just under the top it scorched the mast all along its surface, and started several of the iron hoops. It benumbed all the watch on deck, and created a general consternation in the ship; the lightning is said to have passed down the pumps. Particulars by Lieut. Shewin, R.N., then in the ship.

The wind on the previous days had been south, westerly, and variable, at the time the ship was struck it flew in to the west during a squall with hard rain. It remained at west after the accident, strong breezes and squally; the night was fearfully dark when the lightning fell on the ship.

Thunderer, 74.

1799. September 8th, lat. 18° 49′ N., long. 79° 18′ W., Grand Caymans North seventy-three degrees West, thirty-three leagues; P.M. light airs inclining to calm, Pelican in company; 10h. 30m. squally with thunder, and lightning, and heavy rain. A flash of lightning struck the main-top-gallant-mast, shivered the main-top-mast, and

splintered the main-mast in several places. One man was thrown overboard by it and lost, and several others were badly burnt.

The wind on the previous day had been very variable with moderate weather; on the 8th, the day of the lightning E.S.E. and east; on the succeeding day light breezes and cloudy with the wind at east.

The top-gallant and top-mast were ruined; all the watch in the main-top were so paralyzed at the time that they were obliged to be lowered down. Neale Taylor, seaman, the captain of main-top, is now at Greenwich hospital. Capt. Sir A. P. Green, was also in the ship at this time.

This case is only mentioned in Capt. Hardy's log who then commanded the ship; the other logs do not speak of much damage.

This was the second time within about two years that this ship suffered from lightning.—See case of Thunderer, August, 1797, off Cape Corrientes.

Wasp, 18.

1838. February 25th, Mediterranean; heavy gale of wind with squalls and lightning, which continued the whole of the day. It appears by the medical journal that about 2h. A.M. of the 26th, nine seamen were struck down by lightning, and two of them badly hurt.

The electrical discharge burst over the ship and descended by the main chain top-sail sheets, it passed through the forecastle by the chain cable about which some of the men were sitting. One of the seamen George Griffiths leaning against the chain sheets has remained deaf ever since. He was brought into the sick bay insensible to external impressions, complained on recovering of severe pain in the head, and a ringing sound in his ears, could not hear a word uttered, and could not move the lower extremities, and he was sent to Malta hospital, but returned again much in the same state. He heard the report, and saw the lightning burst, but remembered nothing farther.

The wind on the 24th, A.M. had been from the S.S.W. squally; 3h. 15m. taken aback from the north in a heavy squall with rain; the wind after veered more to the west; 25th, south-west, fresh gales and squally; 10h. P.M. shipped a heavy sea, which washed away the jolly boat; the ship was then running before the wind; 12h. P.M. strong gales with squalls and lightning which at 2h. A.M. on the 26th burst on the ship. This weather continued with frequent lightning until the afternoon of the 27th when the wind flew back to W.N.W., after which west and north-west, moderate and fine.

At the time the ship was struck the top-gallant-masts were housed, she was supplied with the common chain conductor, but it is not said whether it was up or not.

In following out the history of some of those instructive cases of damage by lightning known to have occurred in H.M. Navy, every care has been taken to verify the statements by reference to the official Journals of the respective ships, and the instances have been, therefore, recorded so nearly as possible in the form therein found. It has not been

possible, however, to effect this in some few cases which yet remain to be noticed, the logs of the ships being either imperfect or missing; with these cases we proceed to close the series.

Sir Francis Drake.

1806. Autumn, East Indies; P.M. main-top-gallant-mast and main-top-mast shivered, several of the crew struck down, and other damage.

The wind was from the north, dull weather with light airs; the lightning came up from the southward, and struck down upon the sea previously to falling on the ship. The main-top-mast was split open so that the top-sail-yard could not be lowered down. The falling of the lightning upon the sea conveyed the sensation of a heavy body descending into the water; it struck about two points on the weather bow; immediately after this a second discharge struck the ship.

The log of this ship is missing from October 1806, to June 1807; and in another log a whole year is found compressed into ten pages. Sir Horace Seymour and Captain Crees, R.N., were in the ship at the time this occurred, and have both favoured the author with information on the subject.

Success, 36.

1800. December, off Malta, 8 A.M. heavy rain; a report was heard as if two of the main deck guns had gone off in quick succession; the ship had been struck by lightning, which rent the main-top-gallant-mast and top-mast from the truck to the cap; the iron hoops on the main-mast were burst open, the mast set on fire, and the boarding pikes placed round the mast scattered about the deck. The electrical discharge passed into the waist and melted the copper on the sheave hole of the spare top-gallant-mast, it finally went out of the bridle port.

The log of this ship after September 9th, 1800, is missing; the above notice from information furnished by Capt. Howell. R.N., then in the ship, and Lieut. Leicester, R.N.

Romney, 50.

1802. August 19th, moored in Mocha Roads, Red Sea; A.M. calm and hazy weather; 8h. light breezes and cloudy with heavy rain, thunder, and lightning. A flash of lightning struck the ship and killed one of the seamen (James Cunningham) employed in hauling up the starboard chain cable and clearing the tiers.

Winds alternately variable and calm; Admiral Mason was then in the ship.

Spartiate, 74.

1827. Winter; at anchor in the Tagus; a discharge of lightning fell on the ship, at different times; and although the common chain conductor had been applied, a portion of the discharge struck down into the ship abaft the fore-mast, at some distance from the conductor, and struck the stem-band of the pinnace; no further damage occurred.

On the second occasion a similar result ensued, a portion of the discharge struck in nearly the same place, and filled the starboard side of the main-deck with smoke. This happened about the middle watch.

The weather in the first case had been very squally from the south-west with rain; it increased to a gale soon after, and then became fine.

In the second instance the wind was also from the west, blowing strong with heavy rain.

The particulars of these remarkable instances of the action of lightning were very kindly supplied by Capt. Ogle and Admiral Warren, then in the ship. As no damage was done, they are not recorded in the log.

Semiramis, 42.

1809. June 17th, at single anchor in Vigo Bay; P.M. moderate and cloudy with heavy rain, hail, thunder, and lightning.

A flash of lightning struck the ship and passed down the main hatchway, and along the orlop deck to the fore hatchway to the bitts, and by the chain cable out of the hawse holes; several of the people were struck down, and suffered a temporary loss of sight from the vivid flash of light. A goat was struck down on the main deck and appeared as if seared by a hot iron, and for some little time seemed to suffer pain, especially in moving the right hind leg.

The wind had been on the previous day from the north, after which squally from the north-west. The lightning fell on the ship in a heavy squall from north-west, preceded by distant thunder and torrents of rain; it afterwards moderated, and the wind came from the south-east.

Captain, 74.

1809. August 27th, 4 A.M., lat. 41° N., long. 41° W., fore-mast struck and splintered by lightning; four men killed, and twenty-four others knocked down. The discharge passed out forward into the sea. There had been strong gales and squalls, with heavy rain, wind westerly; at 2h. 15m. dropped calm; 2h. 20m. the wind came in a sort of hurricane from N.W. with lightning and rain.

Particulars from Arthur Bartlett, seaman, Greenwich Hospital, then in the ship, The log records the storm, but not the damage done by the lightning.

London, 98.

1809. January 1st, lat. 23° S., long. 41° W.; 10 P.M. a flash of lightning is said to have struck the bowsprit, splintered it, and killed one man, then traversing the ship along the starboard gangway, passed out over the poop, and struck the end of the spanker boom in its course to the sea.

Particulars by Edward Hill, fore-top-man, then in the ship, and now at Greenwich. The log records the storm and the lightning in general terms; but, says nothing of the damage. The wind was variable in squalls from N.N.E. to N.N.W. The ship had usually a conductor on the main-mast, but it is not said if in place on this occasion. The case is an important instance of an oblique stroke of lightning.

BIRKENHEAD DOCKS
AND
TIDE HARBOURS
as designed by
J M RENDEL F R S. &c. Civil Engineer
1843.

Published for the Proprietors of the Nautical Magazine

Engraved by J & C Walker

DESIGN FOR EXTENDING THE ACCOMMODATION OF THE PORT OF LIVERPOOL, *by the conversion of Wallasey Pool into a Floating Dock, and Scouring Reservoir; for maintaining a deep and capacious low water Basin, accessible at all times of tide, to the River Mersey.—By J. M. Rendel, C.E.*

WALLASEY POOL, from its great capacity and admirable position, offers advantages for the extension of shipping accommodation in the port of Liverpool, of a very commanding description. Not in the shape of rivalry to the magnificent docks now in existence, nor even hereafter to be made, but as affording those adjunct conveniences which the want of space and absence of natural facilities make unattainable in any other locality within the port.

The area of Wallasey pool within its headlands, viz. within Seacombe Point on the north, and Woodside Point on the south, is about 340 acres. The borings made for this inquiry shew that the entire creek once formed a deep low water lake; but like all similar lakes in such localities when left in a state of nature, it has become silted up, and will be entirely lost if not made available to shipping, and maintained by adequate funds.

Warrington Sluice, placed at the head of the pool, discharges in time of land floods, a quantity of water sufficient to keep open a narrow tortuous channel through it, which is notoriously becoming yearly worse, both for navigation and drainage.

The accompanying design will shew that, I propose to construct a wall along the low water margin of the river Mersey, from Seacombe Point to the head of Woodside Ferry Pier. This wall practically speaking, will be parallel with the opposite defence wall of Liverpool Docks. It will, consequently, have the effect of giving a *truer* current than now exists, to the flood and ebb tides, in their passage through this part of the harbour, probably, therefore, it will be the means of deepening the channel on the Liverpool shore; certainly it will prevent the further increase of Pluckington bank northward.

About the middle of this wall I propose to leave an opening of 300 feet wide, as an entrance to a basin of upwards of thirty-seven* acres area, excavated to a depth of twelve feet below low water spring tides, walled with convenient wharfs, and in every respect made suitable as a place of refuge for the numerous vessels now so frequently obliged to seek shelter by running aground on the sandbanks which constitute its site. Such a basin as this would obviously be a vast convenience added to the port, for the accommodation of steamers especially, as they would be able to run to and from it *at all times of tide*, and obtain within it wharfage completely protected from wind, sea, and tides. The Irish Mail Packets would, it is manifest, resort to this basin, as the Birkenhead railway, from London, would, of course, be extended along its wharfs, and the bags and passenger be passed without delay or inconvenience, from the railway carriage the vessel.

At the head of the basin, and as shewn on the design, viz. extending

* This includes the area of the half tide basin and its wharf wall, together seven acres, consequently, should these be built the great basin would be reduced to 30 acres area.

across the pool from the patent slip yard, on the Birkenhead shore to the Smalt works on the Seacombe shore, it is proposed to build a masonry dam for the object of retaining in the pool above, a sufficient quantity of water to form it into a floating dock. Three communications are proposed between this float and the great basin, viz. a pair of gates 65 feet opening, another of 45 feet, and a lock of 50 feet; and the sills of each entrance to be not less than six feet below the Liverpool dock datum.

The shores of Wallasey pool within the dam to be wharfed as required for the purposes of trade with stone walls, according to a uniform plan to be approved, and its whole bed between or within the wharfs, to be dredged to a depth of *not less* than 16 feet below high water of the lowest neap tides, *in its shallowest part.*

According to the lines suggested for these wharfs on the accompanying design, the area of this dock would be upwards of 112 acres. Enormously large as this area would be for any purposes of trade, it is not too large as a reservoir for scouring the basin, considering the tidal deposits of the Mersey as proverbially great; and the basin to be scoured large and deep. The requisite scouring is proposed to be effected by a daily discharge of water equal to the difference between the level of the tide of the day, and that of high water of the lowest neaps. The discharge to be during low water by means of adequate sluices through the dam, laid at the proper level for acting with the best effect on the bottom of the basin.

My experience in such matters enables me to state with confidence that, the power derivable from so extensive a reservoir, taken in connexion with the great rise and fall of the tides in the Mersey, will be quite sufficient for the attainment of the object in view. The design cannot be more favorable for bringing all parts of the basin under the *direct* action of the scour of the sluices, whilst from their frequent use accumulations will be displaced before they have attained a solidity that would require further means for their removal.

It is to be observed that, as there would be no indraught till the tide had risen to the level of the water in the dock, the quantity of silt brought into the basin and dock, would be very considerably less than is at present brought into the pool, which is important, both with respect to the maintenance of the requisite depth of the dock and the basin.

As regards the loss of backwater which the Mersey will sustain in carrying out the design now proposed, it is to be observed that a mere comparison of the quantities of cubic feet of water, at any given tide, passing into and out of Wallasey Pool in its *present,* and in its *embanked* state, would be a very superficial view of the question. At present the backwater passes off at a time of tide when it can have but little, if any, good effect, or scouring influence. When retained till low water, though the quantity discharged will be less than at present, the power gained will be vastly in access, and will be *permanently secured;* for in reference to this point I must repeat a remark already made, that the capacity of the pool for backwater is daily diminishing, and if left in its present state, will at no distant period be entirely lost.

As the permanent level of the water in the dock would be above

Warrington Sluice sill, a new outfall for that drainage must be made. This may be effected in several ways, as for instance, by extending the drain along either shore of the pool, and making a new sluice into the proposed great basin; or, by a new sluice through the Leasowe embankment. By either plan the outfall might be considerably lowered, and the drainage improved. The several small drains which empty into the pool along its shores, are so high as to admit of their discharging above the permanent level of the water in the dock.

In addition to the works already described, I have shewn on the design a basin of nearly ten acres area, immediately north of the present Woodside Ferry Pier, and Public, or Town Slip Way. This basin would amply accommodate, in safety, all the river and coasting craft, that now, at some risk, discharge their cargoes whilst lying aground on the open sandbanks, which constitute its site; and the strand or beach, which it includes, could be, from its then sheltered state, maintained in a perfect condition for the vessels to ground on. To the ferry steamers it would also be a great convenience. Its importance is, however, still more apparent as connected with the probable necessity that may follow the execution of the works before described, for close docks in connexion therewith. Such a contingency is doubtless of sufficient importance to deserve attention in the outset of any undertaking of this kind, and under the influence of this feeling, I have deemed it proper to shew that such docks may be added in a manner that conld require nothing to be undone to accomplish a perfect estali s hment, viz.: in addition to the works now proposed to be executed a western dock of upwards of 11 acres; an eastern dock of nearly 12 acres; an intermediate half-tide basin of upwards of six acres; and a Canal for coasters and river flats, extending along the land side of the docks, and communicating with the basins, and with Wallasey Pool Dock by suitable locks. The borings shew the economical practicability of these several works: it is, therefore, certainly prudent to anticipate them, at least to the extent of at once making the southern tide basin, seeing that it would in the mean time be of great value.

8, *George Street, Westminster, 25th Oct.* 1843.

Russian Generosity.

It is our gratifying duty to record the following:—The ship Lady Raffles, commanded by Mr. Edward Hight, was outward bound in the British Channel in the month of December 1840, chartered by Government for convicts to Van Diemen Land, and fell in with a Russian bark called the Orelia, wheat laden, from Odessa to Falmouth. This vessel having sprung a leak in the night, and being then in a sinking state, Capt. Hight made for her, seeing she had a signal flying, and succeeded after much difficulty, and staving a quarter boat, in rescuing the captain and the crew of 16 men, and getting them safe on board the Lady Raffles, which ship, was fortunate enough to put them the next day on board an inward bound ship to Norway.

His Imperial Majesty the Emperor of Russia having been informed of this act, graciously directed the medal and ribband of St. Anne to be presented to Capt. Hight, in token of approbation of his gallantry.

Pirates in Borneo.

(From the Singapore Free Press.)

Sir.—The suppression of Piracy in the Archipelago is a subject of such importance, that a brief account of the proceedings of H.M.S. *Dido* will be found interesting, and cause regret that she should have quitted the station when but entering on a career, so likely to have proved permanently useful.

Piratical habits are so interwoven with the Malay character, that the mere capture of a few proas, will have but a small effect in curing the evil, and whilst a harrassing duty is encountered, the result is only to drive the pirates from one cruizing ground to another. On the contrary, a system which, joining conciliation with severity, aims, at the correction of the native character, as well as the suppression of piracy, and carries punishment to the doors of the offenders, is the only one which can effectually eradicate an evil almost as disgraceful to the European nations who permit, as the native states engaged in it.

In order to enable your readers to understand this subject, it will be necessary to mention the different description of pirates, their various localities, and the principal scenes of their depredations.

First.—Are the Illanuns of Magindanao and numerous settlements of the same people to the north and north-east of Borneo Proper. These pirates often assemble in fleets of fifteen to twenty proas and cruize for two years or even longer, shifting their ground when food or plunder become scarce. Nearly similar to the Illanuns are the Malukas of Jillolo and the Balanignis from the vicinity of Sulu, excepting that the latter are worse provided with fire arms and distinguished by using long barbed spears with which they hook their captives. The cruizing grounds of these pirates are chiefly the coasts of Borneo and Celebes, and to the eastward as far as Papua, whence they obtain some of their slaves.

The Dyaks of Borneo are a different class of pirates from the foregoing, and if less formidable to the direct trade are far more destructive of human life. The most powerful of these tribes are the Dyaks of Serebas and Sakarran, inhabiting contiguous rivers, situated in the deep bight to the southward and westward of Tanjong Sirik (or Tanjong Sisor of charts) on the north-west coast of Borneo. In each of these rivers mixed with a numerous Dyak population are from 800 to 1000 Malays, who encourage and accompany the more ignorant natives on predatory and head-hunting excursions. Once or twice each year from 60 to 100 war-proas, containing a body of from three to four thousand men sally forth and carry desolation along the coast, whilst at all seasons small parties steal into the rivers and destroy all they meet. From their speed they defy the pursuit of European boats, and from their crafty and sudden mode of attack they are always dangerous. Numerous examples might be given of their temerity, but it will suffice to mention generally, that three hundred Chinese and Malays were cut off in one night some years ago, and that within the last eighteen months a small Malay village was surprised, and about sixty of the inhabitants massacred. In short, these Dyak tribes have long been the terror of the coasts of Borneo, and for many years beyond the control of any government, having three times defeated the attempts of the Sultan of Borneo to reduce them.

Besides these different classes of direct pirates, it must be borne in mind, that most Malay communities will commit acts of occasional piracy when tempted by the chance of impunity, and that piracy in general is mainly fostered and encouraged by Malay chiefs, who receive the Illanuns and others on friendly terms, and drive a profitable trade with them.

Such is the general description of the north-west coast when Captain the Honourable Henry Keppel resolved to visit it in H.M.S. *Dido*. After passing

the entrance of the Sambas rivers, the pinnace and two cutters were despatched along the coast, and at Marundum or Low island near Tanjong Api, fell in with five large Balanigni praos, who saved themselves by their speed, having cut away their smaller boats. Proceeding from Marundum to Sirhassan island, the three boats were attacked early in the morning by six native proas, and after a sharp engagement of a few minutes, three out of the six were captured, with twelve or more men killed, and a considerable number wounded.

The judgment and forbearance of Mr. Horton, the 1st Lieutenant were conspicuous, for on learning that the attack had been made by the islanders, he consented on their properly applying to him, to give back the proas and allowing the Assistant-Surgeon to assist the wounded. These islanders are a trading people, combining occasional acts of piracy with their more peaceful occupations, and the severe example they received, together with the subsequent humane and conciliatory conduct towards them, is calculated to produce the best effects, and instead of exasperating them against Europeans in general, it tends to produce a favourable impression of the British character, and to convince them how superior we are in humanity as well as valour. Under the circumstances, a course of undistinguishing severity would have been making pirates rather than curing the evil habits of education and impunity, amongst a people not otherwise bad. The effects of Mr. Horton's lenity were not long before they became apparent, as letters were received from the principal men of the Islands of Sirhassan and Sobi, admitting how wrong they had been, expressing their gratitude for the mercy shewn them, promising in future never to commit any act of piracy, and requesting if possible that the boats might be sent again to their Islands to drive away the Balanignis.

Whilst the boats were thus employed, the *Dido* off Tanjong Datu fell in with three more Balanigni proas, which after a narrow escape from her thirty-two's got away. On the arrival of the *Dido* at Sarawak a native boat belonging to Mr. Brooke, manned by her crew was sent again to cruize off Tanjong Datu, and a few days after was attacked before day-break by two Balanigni proas, whilst a third remained a witness of the engagement. The two proas soon discovered their fatal mistake, and after a brief and sharp struggle one was captured, her crew killed or driven into the jungle, and the other barely effected her escape with a severe loss in killed and wounded.

At Sarawak, Captain Keppel having made himself acquainted with the state of the Coast, its various Rivers, the character of the Chiefs governing each, and how far they encouraged piracy, and having satisfied himself of the character of the Serebas and Sakarran Tribes, and the frightful amount of their depredations, resolved to atttack the former place as the most powerful and the most lawless of the two. To have attempted the suppression of piracy without this attack would have been entirely useles, and on the results depended the natives opinion of British prowess! The natives generally, more especially those interested in the fate of Serebas, derided the idea that a mere handful of men could in open day take places which for years had defied the assaults and the power of Borneo.

The pinnace, the two cutters, and the native boat already mentioned, manned from the *Dido*, were accompanied by a few natives proas and started for the Serebas River, leaving the ship (on account of the shoalness of the water) anchored at sea.

On the day following, at the entrance of the river, seven piratical proas were seen and chased by the natives boats, one captured and the rest driven back.

The Serebas river may be described as a fine broad and deep stream as far as fifty miles from the sea, with rapid tides and level banks. About thirty miles from the entrance, is the mouth of the small river Rembas with a town of the same name situated on its banks, and about the same distance beyond Rembas is the river of Paku, with the town so called nearly a flood-tide distant from its junction with the main stream. The main stream, after passing Paku,

becomes shoal and narrow, and the forts and town of Paddy are situated up it about twenty-five miles.

Paddy was pitched upon as the point to be first attacked, on account of its being the residence of the most powerful, and the most notorious, of the piratical chiefs, and reported to be stronger than the other places.

Being ignorant of the locality the boats ascended the river steadily, and towards sunset of the 11th of June advanced to the attack of Paddy.

The town was defended by two forts, standing on a tongue of slightly raised land, at the confluence of the two narrow streams Paddy and Liar. The river was crossed by two booms formed of forest trees, made fast with plaited rattans, and the sides spiked with strong wooden posts. The forts were crowded with men, and with a large body ready to assist outside, whilst either bank was lined, and each eminence crowned with Dyaks lying in wait to throw their spears, or with the wildest yells and threats hoping to deter the advance.

The boats dashing at the first boom were brought up by it, and received the enemy's fire, returning it with musketry; when, after a time breaking their way through, they advanced firing up to the forts with considerable execution, and the crews landing, took possession, the enemy having evacuated the place.

On the following day the pinnace and the two cutters, with some small native boats in company, proceeded up the river, and after overcoming many obstacles caused by trees felled across the stream, arrived at dusk at a shoal bank with a strong barrier of wood behind it. The enemy here made a stand, and the tide being at ebb and the water too shoal for the boats to pass, a position was taken up for the night under the left bank of the narrow river.

The night was one of excitement, as the natives several times stole down to the edge of the jungle and attacked the boats, whilst an occasional fire was kept up from their position on the wooded hill ahead. Few of the party will forget the interest of the scene; the rapid and effectual replies of musketry to their native assaults, the wild yells, the stillness presaging mischief which succeeded the crackling of a branch beneath their stealthy steps as they came in hopes of surprising our party, all contributed to banish sleep, and to heighten the effect of place and time.

On the morning following this night of skirmishing, the enemy sued for mercy, and it was granted after they had been made to understand that it was in consequence of their acts of piracy that they had been punished.

When it was proposed to spare the towns of Paku and Rembas, on their giving a proper guarantee for their future good conduct, it was coolly answered by the Malays and Dyaks of Paddy, that those people pirated as much as themselves, and that they had better be punished in the same way.

In the night the boats dropped down the river, and the following evening reached Paku, situated in a clear country, and on a narrow river.

The disaster of Paddy had evidently produced its effect; the resistance was less stout, and the two forts were carried after the pirates had lost a few men.

The Paku river was ascended for a flood tide beyond the town, and the Dyaks seeing their means of defence useless, again sued for truce, which was granted after a similar warning being given as at Paddy.

From Paku the boats proceeded to Rembas, and after ascending that narrow and winding river for a flood tide, found the place evacuated; the same severe example was made, and the same measures pursued in the interior.

Having thus, in seven days, destroyed the haunts of the most dreaded pirates on the north-west coasts of Borneo, the party quitted the Serebas river, and having rejoined, the *Dido* sailed for Singapore.

It is needless to speak of the gallantry of the officers and men of her Majesty's ship, but I may venture to point out what was done, and the beneficial consequences likely to result, or which would have resulted had Captain Keppel been enabled to remain longer to perfect the work so well begun. A party of eighty men accompanied (for I cannot say assisted) by a few native boats penetrated 150 miles or more up rivers totally unknown, formidable from their rapid tides

and dangerous sandbanks, and occasionally subject to a severe bore, in defiance of a population of many thousands. In seven days they attacked three places protected by forts, and in two instances defended by large bodies of men, provided with fire arms, and forced the boats up narrow streams in spite of every obstacle from shallow water and barriers of felled trees, reaching from bank to bank, thus convincing the natives that in their least accessible haunts they were not secure from the punishment they merited. The fall of Serebas produced an impression along the coasts which it would be difficult to convey a just idea of.

Sakarran, the neighbouring piratical tribe, implored that they might not be attacked, promised to forbear from piracy, and offered to deliver up a hundred women and children whom they had captured on a piratical cruize and whom they held in slavery. Two Arab Sherriffs, well known as the abettors both of Dyak and Illanun pirates, sought to avert the blow their consciences told them they deserved, and were not wanting in professions of future good conduct. Though these professions are little to be relied on, they offer a secure test of the effect produced on the native mind, and the example thus made on the worst, and strongest of the offenders, has done more to extirpate Dyak piracy, and the frightful loss of human life which it causes, than any lengthened cruizing at sea.

Under proper superintendance in future the piracy by the Dyak tribes would be at an end, and by firm, but conciliatory conduct to the native chiefs, a beneficial change might be worked on the native character.

Under the circumstances, the return of the *Dido* to China, necessarily causes regret, as Captain Keppel with a knowledge of the coast and its chiefs, would readily have been enabled to gain an influence over them, to check any piracy being committed or abetted, and to extend his measures so highly successful with the Dyaks, to the country of the Illanuns to the northward of Borneo, and thus have afforded permanent protection to the trade and to the unfortunate natives from another race of marauders.

The *Dido* carries many warm wishes on her voyage, and even a hope that we may see her once more.

V.

Sarawah, July, 1843.

British Ships and Seamen in the Pacific.

The ship Juno left Juno Bay, in the island of Ware, lat. 20° 28′., long. 166° 42′ east, fourteen miles to the southward of Fizowee; it is called Juno Bay by the natives, in consequence of the Juno having been there on her former voyage, she being the first vessel that ever put in there. During her stay in the bay, Captain Banks gleaned the following intelligence from Charles———— an English lad, who ran away from the Munford schooner at the island of Leefo, during his last voyage. He had acquired a perfect knowledge of the native language and habits, and had been constantly with them in their travels from island to island. He stated that a party of natives from the north-west harbour of the Isle of Pines had a few weeks before the arrival of the Juno, arrived at Leefo, from whom he learned the following particulars relative to the brig Star, Captain Ebrill, built at Tahiti, which vessel was entirely destroyed by the natives of the Pines: (from what Captain Banks could learn, it must have occurred about a month after the brig Star left Sydney).

It appears that she was lying at anchor, the captain and crew previous to the above occurrence, had been on the most amicable terms with the natives, the captain and crew being ashore cutting wood, and at a signal from Matuku, he principal chief, the natives rushed upon them and slaughtered them with

their own axes, and afterwards devoured them. Matuku then sent some of his own people, together with some native missionaries of the Navigator islands, who, I believe, were sent a short time ago from Sydney, (two of whom Captain Banks personally knew, Noah and Daniel), to tow the vessel on shore opposite Matuku's place; which being accomplished, he (Matuku) ordered the natives of the Navigator islands to be killed, which was done! He then stripped the brig of everything he fancied, afterwards set her on fire; but during the fire, some gunpowder which was stowed aft ignited and blew up, destroying about thirty natives who were standing on the poop.

Charles also stated that he had learned from the natives that the captain and part of the crew of the brig Martha of Sydney, who were missed some time ago at Marree, were seized and murdered by the savages in the following dreadful manner:—They were tied to trees, with their legs and arms extended, and their entrails taken out and roasted; they were then taken down, roasted, and devoured: as a proof of the truth of his statement, he shewed me some clothes which had been given to him by the natives, and which were said by them to have belonged to the unfortunate captain of the Martha.

The report of the loss of the Star, it is to be feared, is too well founded; from the reports of the masters of the ships Regina and Alfred, who had stated that they had seen in the place described by Charles ———, the stern-post of a vessel, supposed to have belonged to the unfortunate Star.

The natives also informed him that the captain and crew of the Micmac, of Sydney, were all killed and eaten by the natives of the Caledonian Reef.

The Orwell arrived at Fizowee on the 30th of March, she had about 12 tons of sandal wood on board; the Regina and Alfred were both lying there; they had a few tons of sandal wood on board. The latter reported two vessels having been at the Isle of Pines, the William the Fourth and the Marian, both of Hobart Town; neither had succeeded in obtaining any sandal wood: they had left word that they should proceed to the Loyalty Islands.

During the Juno's stay in Juno Bay, the natives of Fizowee Ware were constantly at war, and seldom a day passed that some of one party or the other were not killed. The first day the chief officer of the Juno, Mr. Crossly, went on shore at Fizowee, the natives had a human body roasted which they had killed the previous night, and offered him a part to eat, and also some to take on board for the captain, and on his refusal to partake of it they seemed much incensed.

The chief of the island of Leefo, called Bulla, stated he was particularly anxious to have a European missionary on the island, and Captain Banks would be happy to give all the information in his power as to the situation of the harbour, customs of the natives, &c. Should any missionary wish to proceed there, he feels convinced he would be well received, and might be the means of making peace throughout the island.

Edwards' Patent Preserved Potato.

1, *Bishopsgate Street, London, 8th Feb.*, 1844.

Sir.—Referring to a notice contained in the last number of the *Nautical Magazine*, under the head of a "Voyage of H.M.S. Thunderer," alluding to the high price of one shilling per pound charged for the Preserved Potato, at Simons Town, Cape of Good Hope, we, the Patentees, have to express our surprise and regret at the circumstance, and beg to observe that, in *London*, the article is but $4\frac{3}{4}d.$ per lb. in

its concentrated state, and by its great increase on cooking, makes the cost of this nutritious vegetable *one penny per pound* only.

It has been our anxious endeavour that the Preserved Potato should be sold abroad upon the most moderate terms; but, parties having made shipments of the article to the Cape and elsewhere, as merchandize, we have been unable to control their prices. We feel so confident that a high price militates against the demand for the Preserved Potato, for general use, that the subject shall have our immediate attention, and we trust to remedy the evil complained of.

We remain, Sir, &c.,
D. & H. Edwards & Co., *Patentees.*

[Messrs. Edwards' have very properly noticed the remark we made in our last number, by the above letter, and they have our cordial wishes for their success in putting down the imposition alluded to, and in diffusing far and wide the advantages of their excellent Preserved Potato.—Ed. N.M.]

Voyage of H.M.S. Cornwallis.

Capture of Shang-hai, and Progress of the Expedition up the Yang-tse-kiang to Chin-kiang-Foo.

Canto the Fifth.

After taking Woosung, two steamers next day
Were sent up the river which leads to Shang-hai.
The small craft on whom all the light work now fell,
Were towed up by steamers, and did their work well;
They destroyed two large batteries, which opened their fire
On the vessels ahead. They then went up higher,
To the town of Shang-hai, where more batteries in wait
For the ships, blazed away, but met the same fate.
Shang-hai was then taken; a mercantile city,
Surrounded by walls. It was really a pity
To see how the people moved off day and night
With their goods, they were in such a terrible fright.
The rabble were also beginning to "loot,"
And a true Chinese robber is really a brute.
Now, talking of "loot;" (A Bengal word for plunder,
See "Jocelyn on China,") 'tis really no wonder,
That finding ourselves in the pawnbrokers' houses,
So full of odd things we remembered our spouses;
And took little shoes "jude-stone," mandarin silk,
Caps, fur cloaks, and gongs, and odd things of that ilk,
Whenever we saw them; but I'll take my oath,
I got very little,—although nothing loath.
Whenever the soldiers had taken a place,
All the houses and rooms in a certain marked space
Were "billets for troops." And the mandarins' dwellings,
Being officers' quarters—to go on would be "tellings."
The troops at Shang-hai famous quarters had got'
In the oddest of places—a beautiful spot,
To the south of the town, where Chinese take their tea,
With grottoes and bridges, most curious to see,
Of a labyrinth form; in fact, such a scene
As appears on our English blue plates (when they're clean).

The three iron steamers now went on to a lake
Some fifty miles further,—I believe for the sake
Of exploring the river, as far as Hang-choo,
And went to within thirty miles of Soo-choo,
Destroying two small five-gun forts on their way;
But the water then shoaling, went back to Shang-hai.
The Plenipo came from Canton in the Queen,
Here joined us to see what there was to be seen.
Reinforcements were now coming up every hour;
A force well worthy to show England's power
At Woosung had collected. The troop-ship Apollo,
Calliope, Childers, and Rattlesnake follow
Belleisle, with the whole of the Queen's Ninety-eight;
And Endymion fearful of being too late,
With the Auckland, and wherefore has never been known,
We were joined by a French frigate called "Erigone."
On the 6th of July, in five grand divisions,
Set sail this most famous of all expeditions,
With a vessel of war and a steamer to each;
And fine was the sight as reach after reach
Of this beautiful river we passed in succession;
There never was seen a more glorious procession
Than we formed, as we sailed with a fine breeze right aft,
The flag-ship ahead, with all the "small craft"
Pioneering before her; and each of them shewing
In what number of fathoms the ship was then going.
Seventy-three was the number composing the fleet;
There were forty-eight transports well found and complete,
Four troop-ships, ten steamers, (five small and five large),
And twelve men-of-war. There was one left in charge
Of the town of Woosung, with a transport or two,
To stop the great trade going on with Soo-Choo.
Each squadron contained in itself a brigade,
The "head quarters" with first. And the Plenipo staid
In the Queen, which attended the third; while the second
Artillery took. The rest need not be reckoned.
Aground near the Isle of Tsung-ming the first day,
We floated at night; but did not get away
Till the morn of the eighth, when without steam we ran,
About twenty-eight miles to the town of Foushan.
A few batteries here were destroyed, all quite empty;
And we bought fresh provisions and bullocks in plenty.
On this day, soon after the whole of the ships
Had anchored, we witnessed a total eclipse
Of the sun, which appeared our friend Gutzlaff to please,
It being thought "ominous" by all the Chinese.
Through some intricate channels, the next day we ran,
Which the Surveyors buoyed with small boats called "sampan."
And then sailing within a few yards of the shore,
The people who never had witnessed before
Such a curious sight, came running in droves,
Crowding down in the beautiful gardens and groves.
Foushan is the last place where Captain Bethune,
Had taken the Conway,—two years since in June.
Next day we lay quiet; the stream ten miles wide,
And now and then running a very strong tide:
We had three hours sailing next eve before night,
Some green hills at sunset reflecting the light;
On the 12th, clouds and rain, passed the town of Kiang-Yin,
With a hill, a pagoda, and fort with nought in;
Here the Clio was left to take care of the town,
Blockade a canal, and stop junks coming down.
Off a long, low, rich island, two days we remained
In ten fathoms water, current strong; and it rained

Very hard the first day; but the next it was hot;
We landed, and plenty of provender got,
The poor Chinese finding, we paid very well,
Brought plenty of fowls, eggs, and French beans to sell.
On the 14th we sailed, forty miles without towing,
Most fertile the country through which we were going.
Towards evening we came to a range of high hills,
From the west end of which the Chinese sent some pills
At the squadron ahead; but they soon ran away,
For Modeste threw a broadside without much delay.
Here we stopped for four days, the wind having chopped round,
And our anchor was sticking so fast in the ground.
We tried three times to way it,—so the Vixen then ran
With the two chiefs close up to the isle of Kishan,
Near to which a few guns on the Phelgethon fired,
Which she answered so warmly they very soon tired.
The Blonde and small craft were sent up to the mouth
Of the Grand Canal, thus cutting off north from south.
At the mouth of each creek, stopping junks, one remains,
(The Nemesis only some hundred retains)
This rigid and really judicious blockade,
Will do much more than fighting, by stopping their trade.
The 19th brought us up to the famed "Golden Isle"
Or Kinshan—And here let me pause for awhile,
To describe if I can what a beautiful view
Met our sight, as the squadron approached Ching-Kiang-Foo;—
The reach of the river (on the left fringed with rushes)
Is here four miles long,—at the end the stream gushes
Past a beautiful green, wooded island, by name
"Silver Isle" or a Chinese term meaning the same.
Rounding this, at the top of the reach one then sees
In the midst of the stream, Kinshan, covered with trees,
And yellow roofed palaces in the sun shine
Glittering like gold, and then a long line
Of houses and turrets, and curious old towers,
At the base stretch along; and small ladies' bowers
From the trees seemed to peep, while surmounting it all
Is a fine old pagoda, with a bright golden ball
And bells hung to the roofs.—To our greatest delight,
The British flag waved from its top before night.
The sun setting behind threw the whole into shade,
Most lovely and rich were the shadows it made,
Sometimes when the water was thick it would seem,
Like an emerald stuck in a bowl of rich cream.
The Grand Canal running some six hundred miles,
Here crosses the river, between these two isles;
And passing close under the walls of the city,
Its mouth on the south forms a sort of long jetty.
Ching-Kiang from the right bank some five hundred yards
Is seen through the suburbs, and perfectly guards
The canal, while some pretty high hills to the west,
Seem purposely placed to defend all the rest.
But for steam 'twould have taken a very long while
To get through the whirlpools around Silver Isle;
Here Jupiter grounded, and for two days stuck fast,
But Endymion and steam got him off safe at last.
Before evening the whole of the fleet were in sight,
Belleisle having anchored the very same night,
And next day we beheld to our great satisfaction
All the ships close around us and ready for action.
Here I stop for the present in hopes that next time,
I shall have something worthy of putting in rhyme.

H.M.S. Cornwallis, off Ching-Kiang-Foo,
in the Yang-tze-Kiang, July 20th, 1842.

Lightning Conductors.

Another instance has lately occurred of the beneficial operation of lightning conductors on shipboard, when efficiently applied, which we feel it our duty to lay before our readers, inasmuch as the subject has caused much serious discussion, and, the propriety of fixing lightning conductors in the masts and hulls of ships, as proposed by Mr. Harris, been very freely canvassed. The question, however, as we have all along contended, can be only fairly appreciated by an unprejudiced appeal to the history of science, backed by the results of experiments on the great scale of Nature, and by facts generally. Every new instance therefore in which lightning has fallen on shipping armed with the new conductors has necessarily great scientific interest.

It appears by letters lately received from H.M.S. *Minden*, stationed at Hong-Kong, that on the 30th of July last, a very severe thunderstorm occurred there. Mr. Cook, the purser, in a letter, an extract of which appeared in the *Devonport Independent* of the 27th of January says,

"The lightning last night, July 30th, was heavier than ever I saw it before; two flashes struck the Minden, and played about Harris's conductors for some seconds, conveying a stream of fire through the ship awful to behold; a frizzing noise was distinctly heard, and I have no doubt but that we should have received serious injury had we not been furnished with those conductors. We are now lying with the fore-yards and top-masts struck, and have just had orders to receive on board fifty more of the worst cases out of the 55th regiment; we have the sick on two decks at present. I have just been informed, that the lightning last night also struck several merchant-vessels, killed four men, and wounded some others."

Thus it appears that, the most complete protection was afforded to one of H.M. ships employed on an important service by the action of the conductors fixed in the masts of this ship, and that too under trying circumstances in a climate where lightning storms are most severe, and whilst other vessels exposed to the same storm evidently suffered from its effects.

Typhoon in Chusan Harbour.

The following particulars of gales at and near Chusan have been kindly sent us. Typhoons we believe have not hitherto been experienced by foreign vessels in those high northern latitudes; they were generally supposed not to extend beyond the 23rd or 24th degrees.

"On the night of the 1st instant while at anchor in Chusan Harbour, a strong gale sprung up which shortly increased to a typhoon, blowing heavily from the north-east for about six hours; towards daylight on the 2nd, a short interval of calm ensued, after which the wind shifted round to the south-west, and blew with redoubled violence. When the weather moderated, they found that several houses on the beach had been blown down, the "Moira" driven upon Tea Island, and the "Ino" on the rocks north of Macclesfield Island. The former may be got off without damage by discharging her cargo, but for the latter there appeared but little chance.* During the gale the Cacique's barometer went down to 28·30.

The Cacique sailed from Chusan 4th, and on the 5th, about 100 miles north of Formosa, again encountered a heavy typhoon, commencing with a north-east gale which continued with a heavy sea from the eastward until 1 P.M., when as at Chusan, it fell suddenly calm, during which thousands of birds threw themselves on the deck. In a short time the winds rose again from the south-west and soon increased to a terrific hurricane. Anticipating the change of wind,

* We are glad to learn that letters have since been received stating that the Ino has been got off, and sustained but little damage in hull or cargo.

they set the close reefed fore-top-sail and fore-top-mast staysail just in time to catch the wind as it struck the vessel, by which means she was paid off before the wind, when all sail was taken in, leaving her scudding under bare poles till 5h. 30m. P.M., when the easterly swell having gone down considerably, and the wind abating a little, the Cacique was hove to with her head to the S.S.E. under a close reefed main topsail and balanced mizen.

At midnight the weather became moderate, and the barometer, which at 1h. P.M. was down to 28·25 had risen to 29·39. The Cacique stood the tempest remarkably well, and lost nothing of consequence, made no water, and did not ship a single sea. She saw the brig "William" off Ocksue, apparently bearing away for Chimmo, and arrived at Hongkong on the 13th, after a remarkably short passage of nine days.—*Hong-kong Register.*

Harbours on Lake Erie.

Along the entire coast of Lake Erie, from the entrance to the Welland canal at Port Colborne to Point Pelée, there has been for some years but one light, that at Port Burwell; which light, from that harbour being silted up, and unavailable, was of course comparatively of but little use. The extremity of Long Point projecting nearly midway into the lake, was not to be distinguished by a light; and the cut through the spit of land near Port Rowan, which is now so much used by steam and other vessels passing up and down the Canadian shore, was also without a light, and no season has passed without the loss of many vessels from want of the necessary light on this lake.

Lake Ontario has been better provided in this respect, but much improvement was required on it also.

With respect to the harbours at the commencement of 1842, there was scarcely one on the Canadian side of Lake Erie which was not in a state of dilapidation, in many instances so much so as to render it impossible, for vessels to enter them. The consequence was, that the proprietors of vessels in many cases refused to charter them; and it was not unusual to see the few vessels which were engaged "lying to" off shore to be loaded, or to discharge their cargoes by means of jollyboats. The result naturally was, that section of the country suffered most severely from the difficulties to be encountered, and the increased cost of transporting its produce to market.

To remedy these evils the following works are provided for, some of them are in progress, and others about to be commenced forthwith:—

Near the head of Lake Erie, at the Point aux Pins, preparations are being made to convert the natural basin called the Rondeau into a good harbour, by the construction of a breakwater and two piers. When they are built, this harbour will afford the advantages of easy entrance, perfect safety, sufficient water, and ample room to accommodate any number of vessels.

It is proposed to erect a good light at its entrance, and from the harbour to make a facile road, communicating with Chatham, and with the interior of that fine section of the country, for the productions of which this harbour will then be the natural outlet. This road will be terminated at the harbour by a commodious wharf. From Chatham to the Rondeau by this road will be a distance of about seventeen miles; by the present route of the river and lake it is 150 miles and upwards.

At Port Stanley a great deal has been done. Most of the old work, which has been miserably constructed, and was in utter ruin, has been removed, necessarily at much expense. Two substantial piers have been constructed, in order to keep open and shelter the mouth of Kettle Creek, which here empties itself into the lake; the deposit has been removed, which had partly filled it, owing to the state of the old piers, and a good road is being made from it into the interior of the country, passing close to the town of St. Thomas, and uniting with the main London and Chatham road.—*Toronto Patriot.*

Nautical Notices.

Outer Passage to Torres Strait.—Captain Blackwood, employed in the survey of Torres Strait, in H.M.S. *Fly* has transmitted the following directions for ships taking the outer passage, and entering the Barrier Reef by Raine Island, which he considers to be the best he has found, having an open channel about four miles wide to the southward of it, and another, one mile and a half wide to the northward. It will be seen that he alters slightly the position of the island.

A ship intending to enter the Barrier reef by the passage near Raine islet. (and it is the only one to be recommended along the whole line of reef, from Lizard island to Murray island,) should shape a course to make the southern extreme of a large detached reef in lat. 11° 50′ 0″ S., long. 144° 11′ 0″ E. A current of one knot per hour (and more in blowing weather,) may be allowed for setting to the north-west, and no means should be omitted of ascertaining the ship's position in latitude; as should this entrance be passed during the night, the only remaining practicable entrance, until Murray island is reached, is the Pandora entrance, in lat. 11° 26′ 45″ S., long. 144° 6′ 35″ E.

Having obtained a careful latitude, and sighted the breakers, which may be safely approached within a mile, a north (compass) course must be steered for eight miles, along the outer edge of the reef when, this distance being run Raine islet will be seen, and a N.W.b.N. (compass) course shaped for it.

The islet may be known by having a quantity of coarse grass vegetation on it, which shows plainly, and serves to distinguish it from the sand bank of Pandoras entrance, on which there is no vegetation whatever.

A reef extends south-east from it a short mile, and both islet and reef may be boldly approached. It is twenty feet above the level of the sea, at low water, (rise of tide at the islet ten feet,) three-quarters of a mile in circumference, and formed of coral limestone, on which there is a small portion of good soil, again covered with sand.

The geographical position of its north-west extreme is lat. 11° 35′ 10″ S., long. 144° 7′ 09″ E., or 7° 7′ 45″ West of Macquarrie fort, Sydney, placing the latter position in 151° 14′ 54″ East from Greenwich.

A N.W.b.N. course for seven miles, will place a vessel in the centre of the southern channel, when Raine Islet being brought to bear due north by compass, distant from two and a half to three miles, a S.W.b.W. (mag.) course for nine miles, will bring her into soundings of thirty-two fathoms, coarse coral sand, and the reefs fairly entered by a good and safe passage of four miles in width. There is also a good channel of two and a half miles in width on the northern side of Raine islet. In taking this northern passage, the north-west extreme of the islet may be passed within a mile, and a S. 45° W. (mag) course steered, by which means, three or four sunken patches (having the least water three fathoms on them) and bearing W. ½ N. from the islet will be avoided, and the vessel quite in the fair-way.

These patches are four miles W. ½ N. (mag.) from the north extreme of the islet. Should it be in the afternoon when the reefs are entered it would be safer to anchor shortly, as there are two or three sunken patches, on which two fathoms were found, and for which a look out must be kept. The above courses will take however quite clear of them. Good anchorage will be obtained in eighteen and nineteen fathoms coral sand within ten minutes after striking soundings.

If early in the day, which is the most advisable time for entering the reefs, and having obtained soundings a (S.W.b.W.) course for thirty miles will be steered for in Sir Charles Hardy northern island.

Pearson Rock, *China Sea.*—Sir.—While beating down the China Sea, in command of the Bahamian, in September last, with strong south-west gales and

easterly currents, I got embarrassed among the shoals, in the south-east part of the seas at 50 minutes past noon on the 19th, I was surprised to hear the report of breakers to leeward, bore away to have a better view, and passed about three miles to windward of an extensive shoal about two miles long, in a north and south direction, with some rocks above water on the southern edge; blowing hard at the time with a heavy sea, prevented me from lowering a boat to examine it more minutely.

The above danger is in latitude 8° 56′ N., longitude 113° 44′ E., by three chronometers agreeing within three miles in a passage of fifteen days from China, and seems to be another addition to the numerous shoals which occupy that part of the world. I can vouch for the accuracy of the observations, as I had two sets in the same day.

I remain, &c.,

To the Editor, &c. ROBERT PEARSON.

Liverpool Jan. 28th, 1844.

Trinity-House, London, Feb. 15th, 1844.

NEW LIGHT-HOUSE AT THE POINT OF AIR, RIVER DEE.—This Corporation having caused a Pile Light-house to be constructed at the Point of Air, at the entrance of the Dee or Chester River. The following particulars in relation to the position of the said light-house, and to the light which is now exhibited therein, are hereby published for general information; viz.:—

The Pile Light-house is situated below high-water mark, and bears from the station at which the light was previously exhibited, N.E.b.N. distant therefrom 2,500 feet; the depth of water around it at high-water of ordinary spring tides, being about 15 feet; and the undermentioned objects bearing therefrom as follow, viz.:—

North-west light ship . .	N.E. ½ N.
Earwig buoy . . .	W.b.N. ½ N.
Chester Bar buoy . . .	N.W. ¼ W.
Welchman's Gut buoy . .	E.b.S. ¾ S.

The light is shewn in the following manner:—From N.W. round westerly to W.—a fixed bright light; from N.W. round northerly to E.b.S. ¾ S.—a light coloured red, visible only within the Hoyle Sand; from E.b.S. ¾ S. to S.b.E.—a fixed bright light.

These lights burn at an equal elevation of 42 feet above the ordinary level of high-water spring tides.

Note.—The light in the old light-house has been discontinued, but the buildings remain for the present.

By Order, J. HERBERT, *Secretary.*

CAPTAIN COUCH'S SOLID CHANNEL.

January 23rd, 1844.

SIR —I beg leave to acquaint you for the information of the maritime interest, that I have taken out the British patent for the Ships' Solid Safety Channel, and that they have been fitted to H.M. ships *America* and *Wolf*, and the Herald merchant vessel. The two latter have proved their valuable properties on their passage to China, and in those seas for their *great strength, durability, stability, and heaving off the whole force of the seas easily*, from their being built with the *solid inclined plane*. This solid principle will be found to obviate the *dangerous* and *treacherous* character of the *flat plates*, so *generally* and *lamentably* fitted to our merchant ships, than which, nothing can be more

inefficient, and straining the *top timbers*, bringing the fulcrum on the rough-tree-rail, instead of being against the *ends of the beams*, thereby helping to dismast the vessel, as it recently happened in the wretched loss of the Great Britain, last March, by carrying away bulwark and all; and not being able to get clear of the wreck of her fore-mast, which stove in her bows, and caused her to founder.

This case proves my patent principle, by *keeping up the dead eyes*, and enabling the crew to *cut* away the wreck of the masts with the greatest facility, as it happened in the Star Packet, *totally dismasted*, that her carpenter, with his adze, immediately disengaged it, and saved her from foundering on the wreck of her own masts, &c.

From the above two cases, and many others equally conclusive, I can submit with the greatest confidence, that in bringing this patent into general application, it will be certain that most valuable life and property will be saved; and that it will indisputably be found to confirm such a clear conviction of its importance over the present weak, inefficient, and dangerous character of the several plans of fitting substitutes for Channels, which the builders say must be applied for security, these doubtless will, with your publicity, mainly contribute to accomplish.

I am, &c.,

To the Editor, &c. J. Couch.

Wrecks of British Shipping.

(Continued from p. 111.—cs. crew saved—d. drowned.)

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM	TO.	WRECKED.	WHEN.
Anne	Ardrossan	Crawford	Cork	Glasgow	Ailsa Craig	Feb. all d
Ariel	Grimsby,	Self	———	———	Cork Sand	Jan. 12. cs
Baronet 90	———	Wylie	Smyrna	Liverpool	Galeta	Jan. 9. cs
Cambridge	———	———	———	by fire at	Plymouth	Jan. 7.
C. Pearsons	run foul	of in	the Tees	and sunk	———	Jan. 24.
Friendship	Yarmouth	went to	pieces	near No.	2 buoy	Jan.
Hercules	Aberdeen	———	———	———	Herd	Jan. 13. cs
Malton 95	Whitby	———	———	———	Whitby	Feb. 4.
Mary Lander	———	———	———	———	C. Camaret	Jan. 5. cs
Maria	———	Morell	St. Andrews	Jamaica	Jamaica	Nov. 20. cs
Marion	———	Masters	———	———	Tampico	Nov. 6.
Phœnix	Scarborough	———	Mirmichi	Gloucester	Langley I.	Nov. 26
Rowland Hill 100	Perth	Morton	St. Domingo	Liverpool	Off Azores	Jan. 16. cs
Sarah Lovett	St. Stephen	Abbott	St. Stephens	———	capsized	Dec. 7.
Shepherdess	Bideford	Turner	Newcastle	Plymouth	Goodwin Sd.	Jan. 20. cs
Sir J. Gordon	Banff	Reid	Rouen	Hartlepool	Hasboro'Gat	Jan. 2. cs
Stag	———	———	I. Ware	burnt by	natives	Sept.
Stirling	Shields	Hunter	London	Shields	Scroby	Feb. 1. cs
William and Ann 105	P. William	abandoned	seen on	Jan. 12th	———	

99—Several of the crew drowned.

100—Run down by an American ship name unknown. Crew saved by Caroline Amelia and landed from the Princess Royal at Dover.

101—Three of the crew perished, the rest taken off by the Ann Todd of Shelburne, and landed at Barrington, N.S.

103—Sprung a leak and sunk, crew landed at Great Yarmouth.

104—Reported by brig Star, (Jones) burnt by natives and that master and mate jumped overboard and were drowned, the crew massacred by natives.

The Pendulum Marine Artificial Horizon.

[In placing the following testimony of this instrument on record, from two such experienced seamen as Captain Beechey of H.M.S. *Lucifer*, and Captain Cook of the Mercantile Marine, we believe, that we are only doing justice to an invention which is calculated to be of great importance to seamen.]

H.M.S. Lucifer, Nov. 23rd, 1843.

Sir.—You may, perhaps, like to have the few observations we were able to make with your Artificial Horizon, in preference to waiting for a longer list. I have, therefore, inclosed a paper in which you will find these tabulated, and I have only to observe here in addition, that you are to make allowances for the instrument being strange to some of us, that is provided you think the discrepancies great; but it appears to me that if we could always arrive as near the truth as the *extremes* of the errors here recorded, we should consider your purpose answered, for it is not a minute exactness that we are to look for, but for such an approximation as will enable us to determine *nearly* where we are.

I cannot flatter you that near approximations will be obtained by *every* observer, as the instrument requires steady and skilful manipulation, but with such as have a quick eye, and a patient and expert hand, the instrument will, I fully believe, answer the intended purpose, in moderately smooth water at all events.

I am &c.,

F. W. Beechey,
Captain R.N.

Observations made with Captain Becher's Pendulum Horizon.

By a mean of 33 observations the pendulum correction was found to be + 23′ 00″.

Apparent Alt. of sun by Sea horizon.	Apparent Alt. of sun by Capt. Becher's, Horizon allowing the pendulum correction.	Alt. by Capt. Becher's, Horizon Differs from alt. attained by Sea Horizon + or —	Remarks.
° ′ ″	° ′ ″	′ ″	
44 10 30	44 8 0	−2 30	
44 6 30	44 6 0	−0 30	
44 1 30	44 2 0	+0 30	
43 56 30	44 1 0	+4 30	
43 39 30	43 34 0	−5 30	
43 35 30	43 33 0	−2 30	
43 31 30	43 29 0	−2 30	
43 28 30	43 26 0	−2 30	
43 25 30	43 25 0	−0 30	
46 42 54	46 44 15	+1 21	At sea, water moderately smooth.
46 33 22	46 38 00	+4 38	In these observations two observers
46 25 52	46 27 00	+1 08	were requisite, and part of the dis-
46 20 36	46 23 00	+2 24	crepancies may reasonably be attribut-
46 14 23	46 16 00	+1 37	ed to that circumstance.
46 8 28	46 12 00	+3 32	
46 4 30	46 3 00	−1 30	
45 58 16	46 0 0	+1 44	
45 52 20	45 55 0	+2 40	
45 49 10	45 46 0	−3 10	
45 30 16	45 32 0	+1 44	
45 24 22	45 28 30	+4 8	

Observations for Latitude.

Date	Place.	Observed alt. of sun by Pendulum Horizon.	Pendulum error +	Latitude by Pendulum Horizon.	Latitude by triangulation.	Remarks.
1843.		° ′ ″	′ ″	° ′ ″	° ′ ″	
Aug. 21	Piel of Fouldrey	47 30 00				
		31 30				
		30 00				
		30 00				
		30 15				
		31 45				
		31 45				
		31 45				
		31 45				
		31 30				
		47 31 01	23 00	54 7 02	54 4 06	
Sept. 5th	At Sea.	42 22 00				
		24 00				
		19 00				
		25 00				
		24 00				
		22 00				
		24 00				
		24 00				
		42 23 00	23 00	53 57 23	53 57 00	

41, *Myddelton Square, Jan. 11th,* 1843.

Sir.—I have looked through all my memorandums, and regret that I can only find five observations taken with your horizon. I give you these with the dates, and regret that I cannot at the same time furnish you with those taken by the usual method. By referring to the log you will find that they are not far from the mark, whether the latitude was found by the sea horizon, or on land by the theodolite.

During the time the Expedition was ascending the river, the weather continued so cloudy, that we had few opportunities of observing the sun's meridian altitude. When it was descending, the sickness on board, and the state of my own health, prevented me giving that attention to the instrument, which I otherwise was anxious to do.

From what I have seen of this instrument, I have no hesitation in saying, that the most beneficial results might be expected were it brought into general use, more especially on entering the Channel in foggy weather, when the sun often shews itself though no horizon is visible. If there were a possibility of ascertaining the latitude in such weather, I am persuaded that we should have few wrecks in the Channel.

I feel convinced that after a little practice the observer would find no more difficulty in ascertaining the latitude with your Horizon, than he would at first find in taking a lunar distance with an inverting telescope.

With a sincere desire that this useful invention may become generally known,

I remain, &c.,

H. Cook,

Late one of the Commissoners to the Niger.

June 1,	at sea, lat. at noon by Becher's Horizon	22°	30′ N.
" 2,	" " "	19	42
Aug. 23,	River Niger "	6	14
Sept. 2,	" "	6	52
" 9,	" "	7	8

THE PENDULUM HORIZON.—HIS Imperial Highness the Grand Duke Constantine, of Russia, having directed one of Captain Becher's horizons to be constructed for his own use, has graciously presented him with a splendid ring, consisting of an amethyst set in a profusion of large diamonds, in acknowledgement of the description of it which was drawn up for His Imperial Highness's especial use by Captain Becher.

The horizon was made by that excellent artist Carey, and fitted by him to one of Simms's favourite sextants.

DECISIONS IN THE ADMIRALTY COURT.

BROTHERS.—*Collision.*—Another case of consolidated, cross actions, in which were the owners of the barque Brilliant bound from London to Glasgow, in ballast, and the Brothers from London to the Sandwich Islands, with gunpowder and general merchandise.

Captain Weynton :—It is our opinion that the Brothers being on the starboard tack ought to have kept her wind; and that the Brilliant being on the larboard tack, ought to have given way. Her not doing so occasioned the collision.

COLONIA.—*Collision.*—A suit instituted to recover the amount of damage sustained by a collision between the Susan and this vessel, on the 4th of October last off Folkestone. A cross action was entered by the Colonia against the Susan. The court was assisted by Captains Ellerby and Gorden, who imputed the blame to the Colonia; and the court, therefore, pronounced for the damage claimed by the Susan, dismissed the action brought against her by the Colonia, and decreed the cost in both cases.

HEBE.—*Salvage.*—A suit to recover remuneration for salvage services rendered by the crew of the Two Friends, on the 9th of October off Yarmouth. A tender was made of £42, which the court overruled, and decreed the sum of £72.

NEW CHARTS.

(Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.)

THE RIVER SHANNON, *in seven sheets,—By Commander Wolfe.* These extend from Limerick to the Sea.

LOUGH REE, *on the Shannon.*

THE GREAT BAHAMA BANK, *with its islands cays and channels, sheet* 1,—*By Commander R. Owen, and E. Barnett, and Lieut. T. Smith,* 1836 *to* 1842.

THE HONDURAS GULF, *with the Zapotilla cays,—By Commanders R. Owen, and E. Barnett.*

THE WEST COAST OF AFRICA, *sheet* 2, *Azamor to Santa Cruz,—By Lieut. Arlett,* 1835.

The Islands of Patmos, *(now Patino) Arki and Lipso, the ancient Architis and Lipso, with the adjacent Isle Gaidaro,—By Commander T. Graves, and the Officers of H.M.S. Beacon*, 1837.

Port Isine, *Asia Minor,—By Commander T. Graves, H.M.S. Beacon*, 1837.

Movements of Her Majesty's Ships in Commission.

AT HOME.

Alban, st. v., Portsmouth.

Albion, 90, Cork, Dec. 29.

Caledonia, 120, Plymouth.

Camperdown, 104, Feb. 1, paid off, and recommissioned by Com. J. M. Morgan for flag of Vice Admiral Sir John White.

Curlew, 10, paid off at Portsmouth, Dec. 28.

Penelope, st. v. Plymouth, Jan. 30.

Prometheus, st. v. Plymouth, on her way to Mediterranean.

San Josef, 112, Plymouth.

Volage, 26, Feb. 1, sailed for Cork.

Portsmouth.—*In Port.*—St. Vincent, Victory, Excellent, Victoria&Albert, Dee

Plymouth.—Resistance, Diligence, Express, Confiance, Larne.

Sheerness.—Ocean, Speedy, African.

ABROAD.

Alert, 10, Ascension, Dec. 14.

Alfred, 50, Monte Video, Nov. 18.

Bittern, left Simons Town for Port Natal, Dec. 3.

Castor, 36, left Simons Bay for Hong Kong, Oct. 27.

Cockatrice, Rio, Dec. 24.

Curacoa, 24, Rio, 24.

Daphne, 20, Monte Video, Nov. 18.

Ferret, stationed off Sierra Leone.

Gorgon, st. v. Monte Video, Nov. 18.

Hermes, st. v., Port Royal, Dec. 30.

Heroine, 10, Ascension, Dec. 18.

Hydra, st. v. Ascension, Dec. 7.

Illustrious, 72, Port Royal, Dec. 12.

Inconstant, 6, Port Royal, Dec. 14.

Madagascar, 44, Ascension.

Pearl, 18, Monte Video, Nov. 18.

Pique, 36, Port Royal, Jan. 4.

Racer, 18, Monte Video, Nov. 18.

Rapid, 10, Princes Island. She had taken a slaver with upwards of 300 slaves. This is the third full slaver taken by Lieut. Com. Earle, who has liberated upwards of 1200 slaves during his service on the coast.

Ringdove, 18, Port Royal, Dec. 27.

Rose, 18, left Port Royal for Vera Cruz, Dec. 20.

Satellite, 18, sailed for Brazils, Jan. 27.

Spartan, 26, Port Royal, Dec. 21.

Spy, 3, Bights of Wydah and Lagos.

Thunderbolt, st. v. left Simons Bay for West Coast.

Promotions and Appointments.

(From the Naval and Military Gazette.)

APPOINTMENTS.

Rear-Admirals—W. F. Wise, c.b., to be commander-in-chief in the Pacific—Sir T. Cochrane, Knt., c.b., to be commander-in-chief in the East Indies.

Captain—H. D. Chads, c.b., (1825) to be commodore 2nd class, to hoist his pendant on board the *Cambrian*.

Commanders—W. Finlaison, (1820) to *Tortoise*, as governor of Ascension—J. W. Morgan (1841) to *Camperdown*—G. Frazer (1841) to *Lucifer*—J. Wolfe (1843) to *Tartarus*.

Lieutenants—T. Gresham (1844) to *Formidable*—F. E. Forbes (1843) to *Childers*—J. H. Genneys (1838) to be flag-lieut. to the commander-in-chief at the Nore—J. Burrough (1827) aed J. R. Baker (1828) to *Tortoise*—H. Eden (1837) to study steam and engineering on board the *Sulphur*—J. E. Cabburn (1815) to be agent in a mail packet at Southampton—W. T. Bellairs (1819) to *Ocean*—A. Anderson (1842), J. Robertson (1815), Hon. P. F. Pellew (1844), B. Young (1841), M. Conolly (1842) to *Cornwallis*—J. Steven (1815) to *Raven*—J. A. St. Leger (1841), R. J. D. Waddilove (1843), R. B. Creyke (1843), and H. B. Gray (1844) to *Penelope*—J. Wilcox (1841) to *Vixen*—W. F. Fead (1838), T. C. O'D.

Whipple (1840), and R. Hall (1843) to *Camperdown*—H. Ainslie (1838) to *Excellent*—G. T. C. Smith (1841) to *Lucifer*.

MASTER—J. K. Martyn to *Tortoise*.

MATES—W. A. R. Lee and A. Bland to *Excellent*—H. T. N. Chessyre to *Prometheus*—P. W. Coventry to *Vernon*—F. W. Smith, W. Amphlet, R. Patey to study at Naval College—E. B. Rice to *St. Vincent*—F. K. Hawkins, W. G. Herbert, and G. W. Preedy to *Camperdown*.

ASSISTANT-SURGEONS—L. C. Urquhart to Sheerness yard—J. L. Monteith and R. Hooper to *St. Vincent*—R. Clarke, M.D., to *Prometheus*—W. Rae, M.D., to *Minden*—W. Davis to *Camperdown*—J. Paul to Greenwich Hospital—D. Booth, A. Lille, A. Coates, E. J. Brown to *Penelope*.

SECOND MASTERS—W. Lidstone to *Pigmy*—F. McBean to *Excellent*.

MIDSHIPMAN—W. Pellew to *Excellent*.

NAVAL CADETS—J. F. Lloyd to *Alban*—F. S. Dallston to *Tortoise*—B. Hallowes to *St. Vincent*.

PURSER—J. McArthur to *Tortoise* and storekeeper at Ascension.

CHAPLAINS—G. Bellamy to Island of Ascension—G. Richards to *Victory*—G. R. Lewin to *Camperdown*.

NAVAL INSTRUCTORS—P. Robertson, C. Stark, G. J. Bourne to *Excellent*.

CLERKS—T. Messum to *Imaum*—D. Jardine to *Hecate*—M. Crouch and A. Price to be secretary's clerks to commander-in-chief at the Nore—Green to *Victory*—W. H. Mellish to *St. Vincent*—J. Thornton to *Prometheus*—D. Gordon to *Tortoise*.

COAST GUARD

Com. D. Curry to Ryde—Com. Kerr to Weymouth—Com. G. L. Wolley to Newcastle.

Lieutenants—W. Riches to Hasbro'—C. Blyth to Ballyhalbert—C. O'Brien to Newton—T. E. James to Lyme—H. Crocker to *Prince Albert*—J. Kiddle to command *Harpy*—C. H. Baker to *Vulcan*—Samwell to Mevagissy—C. Goldsmith to *Shamrock*—W. Fuller to command *Dolphin*.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

At Edinburgh, the lady of Com. the Hon. C. St. Clair, R.N., of a son.

At Lasswade, N.B., the lady of Capt. G. A Elliott, R.N., of a son.

At Dover, the lady of Capt. Manners, R.N., of a son.

Marriages.

In London, F. W. Raper, Esq., to Rebecca Linzee, daughter of S. Giles, Esq., R.N.

At Stoke, Jan. 17th, Mr. C. Hall, R.N., to Sarah Mary, daughter of the late Mr. J. Fagan of Devonport.

At Kingston, Jan. 16, Mr. J. Maddock, R.N., to Jane, daughter of Mr. G. Geary of Portsmouth.

At Titchfield, Feb. 1, the Hon. Sir E. Butler, son of Lord Dunboyne to Uriania Elizabeth, daughter of the late Vice Admiral Lord Hervey Poulet, K C.B.

At Chatham, Feb. 1, the Reverend A. Fielding, R.N., to Jemima daughter of the late Rev. Sir J. Fagge, Bart., Kent.

At St. Martin's, H. B. Yule, R.N., son of the late Com. Yule, R.N., to Francis Rebecca, daughter of Capt. Byrne.

At St. George's, Hanover Square, 8th Feb., the Hon. Capt. Denman, R.N., to Grace, daughter of J. W. Russel, Esq., Ham Hall, Staffordshire.

At Dublin, Feb. 8th, J. Pankey, Esq., R.N., to Matilda, daughter of the late Capt. G. W. Hamilton, R.N.

Deaths.

At sea, H. N. Budd, R.N., son of Capt. H. H. Budd, R.N.

At Hythe, Feb. 13th, the yonngest daughter of Com. W. Prowss, R.N.

At Edinburgh, Jan. 26th, Capt. T. Innes, R.N.

At Plymouth, Feb. 6th, Mrs. Price, relict of Com. W. Price.

At Falmouth, Feb. 8th, Lieut. A. R. Passingham, R.N.

Lately, at Falmouth, T. Fitzgerald, Esq., purser R N.

On the 26th Jan. Charles, son of E. Dyer, Esq., and nephew of Capt. Sir T. Dyer, R.N.

At Stoke Road, Jan. 29th, Sarah, the relict of Mr. Weeks, R.N.

At Haslar Hospital, Feb. 5th, Mr. J. Atkinson, R.N.

At Haslar Hospital, Mr. J. Strain, RN

It is always gratifying to mention instances of good feeling in our commercial transactions with other nations, and the following is equally creditable to the donors and the recipient. Mr. Edward Pashley, who, during the last 12 years, has regularly taken charge of the London and New York packet-ships to Portsmouth, was on Wednesday last complimented with an elegant silver tea-service—the gift of the different captains on the line. A dinner was at the same time given him at the London Coffee-house, Ludgate Hill, which was attended by Captains Moore and Hebard, of the Hendrick Hudson and Quebec, and Messrs. Phillips and Tiplady; after which Captain Moore, in the name of all the Captains, presented the tea-service, which is inscribed as follows:—"Presented by the Commanders of the New York and London line of packet ships to Mr. Edward Pashley, as a sincere token of their respect for him as a man, and esteem as a pilot.—1st January, 1844." —*Shipping Gazette.*

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of January to the 20th February, 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Su.	29·90	29·96	42	44	32	45	W	NW	3	4	o	o
22	M.	29·90	29·85	38	41	37	42	SW	NE	1	1	bcm	bcm
23	Tu.	30·00	30·06	36	42	31	43	N	NE	1	2	bc	o
24	W.	30·16	30·18	37	38	34	39	S	S	1	1	o	bcm
25	Th.	30·24	30·18	33	43	29	43	SW	SW	2	2	bc	bcmp (4
26	F.	30·22	30·23	39	45	38	46	NW	NW	4	4	bcm	bm
27	S.	30·25	30·20	40	46	34	47	W	W	3	3	o	o
28	Su.	29·91	29·84	45	51	40	52	SW	NW	5	5	qor 2)	qbc
29	M.	29·97	29·95	38	45	35	51	SW	SW	2	4	b	op (3)
30	Tu.	29·82	29·84	45	48	43	49	NW	W	3	5	bc	qbc
31	W.	29·81	29·78	33	34	32	36	NW	NW	8	7	qbcps (2)	qbcps (3
1	Th.	29·90	30·02	29	34	28	35	NW	W	4	3	b	bm
2	F.	29·50	29·44	32	33	27	34	E	E	2	2	os 1) (2)	os (3) (4
3	S.	29·89	29·92	30	36	27	37	NW	NW	2	3	bc	bcm
4	Su.	29·69	29·48	30	34	28	36	S	S	3	3	os 2)	os (3
5	M.	29·40	29·40	29	34	28	35	NW	N	2	2	bcm	bm
6	Tu.	29·53	29·54	31	37	26	38	SW	SW	3	2	bc	b
7	W.	29·28	29·26	37	43	30	44	S	W	4	3	or (1	or (4)
8	Th.	29·32	29·38	33	41	31	41	W	W	6	6	qb	qb
9	F.	29·18	29·15	32	40	31	41	SW	W	2	4	b	bcp 4)
10	S.	29·38	29·50	33	37	32	38	N	N	3	5	osr (1)	qbc
11	Su.	29·72	29·82	33	37	31	38	N	N	4	4	ops (2	bc
12	M.	29·76	29·95	31	33	30	34	N	N	3	2	o	bcm
13	Tu.	30·06	30·05	26	29	25	30	NW	W	2	2	of	bf
14	W.	30·02	30·00	26	39	21	40	SE	S	2	2	of	o
15	Th.	29·94	29·92	37	44	35	45	S	SW	3	4	bc	od (3
16	F.	30·13	30·16	34	44	32	45	SW	NW	2	4	b	bcm
17	S.	30·10	30·04	38	46	33	47	W	W	2	4	bc	bc
18	Su.	29·85	29·75	41	43	36	45	SW	S	4	4	bc	od (4
19	M.	29·40	29·31	42	45	40	46	SW	SW	6	6	qbcr (1 2)	qbc
20	T.	29·72	29·78	31	37	30	38	NW	NW	4	5	b	qbc

January 1844.—Mean height of the Barometer=29·968 inches; Mean temperature = 38·6 degrees; depth of rain and snow melted fallen 3·19 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The subject of Mr. Bateman's letter shall receive attention in our next.

Mr. Turnbull, of Cottage Lane, Commercial Road, will find his wood cut (for which we have not room) at our Publishers.

We have been again obliged to postpone the Nautical Rambles, but they shall be resumed in a future number.

Hunt, Printer, Carlisle Street, Maida Hill.

Description of Zanzibar and its Islands.

By Capt. W. F. W. Owen, R.N.

Zanzibar.—The name of this Queen of Eastern Africa is sometimes written Zanguebar, and with the Arabs the one is as common as the other.

Its extent in latitude from Ras Ngoowy in 5° 42′·8 S. to Ras Kizimkaz in 6° 27′·7 S. is about fifteen leagues, and its greatest breadth from Ras Shangany, on which the town is built, to Ras Chuaka, on the eastern coast, is about six leagues, but its general breadth is from three to four leagues.

This island is the metropolis of the Imaum of Muscat's possessions on the east coast of Africa; it is said to contain a population of upwards of 200,000 souls,* including slaves and free, the bulk of the population being slaves.

The inhabitants are composed of three classes, all professed Mahometans; 1st Arabs, 2nd Sowily, 3rd Negro slaves from all parts of the coast.

As it was formerly the principal settlement of the Sowily on this coast, so their language, called the African, is that generally spoken on this island, in common with all the places from Patta southward to Ibo; and the inhabitants of that cast are mostly the proprietors of the soil, which is cultivated by negro slaves, who in a generation or two consider themselves Sowily also.

The Arabs are of two classes, the military who compose the garrison, rarely exceeding 200 in number, and the merchants; among both of these many Sowily are also to be found. Besides the garrison, the Imaum has generally a disposable force, greater or smaller according to his exigencies. But his military officers are mostly Arabs; and as family ties impose a claim for mutual friendship, and support to very remote degrees of consanguinity, so can he seldom use his power against other Arabs, who claim to be independant of him, because his own force is composed probably of many relatives of those he would employ them against. Thus it is, that with a force sufficient to overwhelm anything that can be opposed to him on that side of Africa, he has for many years been enabled to subjugate Mombas, governed also by Wahaby Arabs from the neighbourhood of Ras ul Kheima, nominally a part of his dominions, and who have family connections throughout his Arabian territory.

The town of Zanzibar called, I believe, Shangany or Changany, is situated on a low point of sand, so named. It has a square wooden fort and a few miserable cannon of small calibre; and the town is very irregularly built, but the avenues or streets are much more open and airy than in Arab towns generally. It may contain 3,000 or 4,000 inhabitants, and is almost isolated by the shallow port; and as much of the port dries at low water, the situation is unhealthy for Europeans; but the land within the town being more elevated, is said to be very sane, as well as very fertile in all tropical productions.

* Captain Moresby of the Menai, who was there in 1821 and 1822, calculates the population at 300,000; and the Arabs assume it at half a million.

The general aspect of the island is very agreeable and inviting, and is nowhere very high, but has everywhere a moderate elevation from 30 to 100 feet high. There are some hills at the south end of the island, which may be 300 to 500 feet high.

There is a very considerable commerce at Zanzibar, with all the ports and places from Chuluwan, near Sofala, to Mecca in the Red Sea, and with the coast of Arabia, thence to Muscat, and even with Persia within its gulf, and with every part of Madagascar and the Comoro isles, and particularly with Bombay and Surat. Until lately, it was a mart for slaves, of which full 20,000 passed through it annually for various parts of the globe, and perhaps one-fifth of that number do still pass through the hands of its merchants annually.

From the western shores of Zanzibar the coast of the main land is distant from five to eight leagues; but a part of this space, which it will be the business of this memoir to describe, is occupied by shoals, which so long as unexplored were very dangerous, so that the channel is seldom used, except by such vessels as desire to anchor at a place within it.

North point of Zanzibar.—The north point, or Ras Ngoowy, or Noongwy, Hog point in 5° 42′·8 S., 39° 22′·7 E., is the northern extremity of the north peninsula, which is about a mile broad there, from west to east, widening gradually to the southward, being at its gorge near Um Kokotony five miles broad. At Um Kokotony 5° 51′ S., 39° 18′.3 E., there is said to be a creek, which forms as good a port as that at Shangany. Between Ngoowy and Kokotony the coast line is nearly due south; but about a league southward from the Ras there are two small islets about a quarter of a mile off shore, standing on a considerable coral reef not quite a league in extent north and south, and extending westward of the islets, near a mile, these having no name, we called them Salley islets and reefs, after the Arab who was then British consul.

The island of Tumbat is five miles long, covering the western shore of the northern peninsula, from which it is two or three miles distant; but its south end is not more than a mile from the cliffy point, between Kokotony and Ooswamemba (sandy point). North extreme 5° 52′·5 S., 39° 14·′8 E.

The western coast of Tumbat is quite clean, and has very deep water close to it, and is mostly a rocky cliff similar to the western shore of the north peninsula.

At the north end of Tumbat there is a small islet, wooded, which is called Moina-moina ; a reef covers both this and the north end Tumbat. Moina-moina islet north point is in 5° 45′ S., 39° 15′·3 E.

There is another small islet called Benothmun, nearly mid-channel, between Tumbat and the peninsula ; but there is said to be a good passage between Tumbat and the said peninsula, which we did not particularly examine, except where we have marked soundings on the plan.

Ras Ngoowy or Hog point is itself a low shore covered on its north by a reef for nearly a mile ; but the rocky cliffs recommence on its west, and continue south on the western shore to Kokotony, and from its east they continue southward to Muemba, which is another small islet

and pretty considerable reef about five miles down the eastern coast from Ras Ngoowy.

From Kokotony the shore extends due west about a league to the cliff before mentioned, (as nearly south from Tumbat,) and there the land falls back to the south forming a shallow bay, of which Ooswamemba, or sandy point, is the western boundary; and in the channel between sandy point and Tumbat is the dry sand of Kokotony. The space between Kokotony and Ooswamemba is almost a continued village, and a mile south of the latter the cliffs again commence which bound Zanzibar on its west; they run to the southward about a league to two more villages, whence there is a sandy beach all the way to the town; except the two very small rocky points of Bubooboo rivulet. Bubooboo north cliff is in 6° 4′·2 S., 39° 15′·4 E.

Almost a league south of Bubooboo is the village of Mtony on the east side of the English pass into the road of Zanzibar, which pass is between the coral reef and verdant islet Chapany on one side, and the coast of Zanzibar on the other, which is not more than half a mile wide, but has not less than eight or ten fathoms any where mid-channel. The watering place of Mtony is in 6° 8′ S., 39° 15′·8 E.

The town is about two miles to the southward of the pass and stands on a projecting peninsular point of sand, called Ras Shangany. Point Shangany town and fort is in 6° 9′·6 S., 39° 14′·4 E.

The sandy beach extends about two miles to the southward of the town, where the cliffs again form the coast for a league; they form three rocky points, called Chuckwany, Maja, and Booya, (not Boonya); the first two points are within a mile of each other: and are covered by the continuation of the sandy beach and two isolated dry sands. From Point Maja the sandy beach and rocky points intermit all the way to Ras Kizimkaz, which is the south cape of Zanzibar, and is a rocky promontory, and steep to. Ras Maja west extreme is in 6° 13′ S., 39° 15′ E., and Ras Booya in 6° 14′·6 S., 39° 16′ E.

Point Booya is two miles S.S.E., easterly from Maja, and near three miles S.W.b.W. from Booya is Choomby, or Pass island, a moderately elevated island, with rocky shores, and well wooded. It is seen clearly from the roads of Shangany. It is three-quarters of a mile long from north to south, and one-fifth of a mile wide; on its north-east about a cable's length there is an isolated dry sand or sand islet, and Choomby shoal bank extends near a mile on its north-east. Choomby, or Passage Island is in 6° 16′·4 S., 39° 13′·7 E.

S.b.E. two miles from Booya is the northern Ukomby, a rocky islet, very small; and a mile S.E.b.S. from it is the southern one, thrice as large, with a small rock near its north point. The Ukomby islets are half a league off shore, leaving a clear and deep passage, apparently, between them. The shores from Booya southward seemed quite clean, but there is a shoal a mile south-east of the southern Ukomby, called Ukomby bank, whose limits we did not examine and only took one line of soundings across it as shewn by the plan. Ukomby north islet centre is in 6° 16′·8 S., 39° 16′·2 E.; Ukomby south islet centre 6° 17′·5 S., 39° 16′·6 E.

Near four miles S.E.b.E. ½ E., from Ukomby islet, is Moresby's islet, of a similar description; it is about a mile off the low sandy shore of

Zanzibar; abreast of it, not half a league E.S.E. from Moresby's islet is Point Menai, the southern extreme of a peninsula of rather elevated land; and midway between it and Booya about a mile within the shore is the conical hill and peak of Kumbeeny (not Kumteeny) which is about a mile also from the north-west shore of Menai bay. Moresby islet centre is in 6° 19′·3 S., 39° 20′ E.; Kumbeeny hill and peak in 6° 15′·7 S., 39° 19′ E.

Ras Menai forms the south-west point of the beautiful bay, and seemingly excellent port of Menai; which is five miles deep from north to south, and four miles wide due east from Menai. Ras Menai is in 6° 19′·8 S., 39° 21′·2 E.

Due south of the Ras about half a league are the small islet and rocks of Meewee, and about the like distance south-west of Meewee is the larger islet of Kiseewa Ngoowy, (literally Hog island,) about the size of Choomby; S.E. ½ S. four miles from Ngoowy is the largest and southern island of all, called Kwaly. Kiseewa island centre is in 6° 23′ S., 39° 20′ E.

Within the range of islets enumerated southward of Ras Menai there are three others; one very small sandy islet a mile north-east of Ras Menai, standing on the eastern edge of a shoal bank or reef which covers the eastern shore of Ras Menai. Boundary islet centre is in 6° 21′ S., 39° 23′ E.

S.E.b.E., near two miles from the Ras is Boondwy (not Boonday) islet, and half a league further in the same direction is Mgomany islet, both about the same size as Meewee.

North-west of Kwaly on a spit in that direction from the bank on which it stands, are two very small islets, and one of bare sand, and on the east of Kwaly another islet. The north-west spit extends half a league; the eastern about a quarter of a league from the shores of Kwaly. Mgomany islet centre is in 6° 22′ S., 39° 24′ E.; Kwaly islet centre in 6° 26′ S., 39° 23′ E.

Four miles N.E.b.E. ½ E., from Kwaly is the peninsular point Mbweny with a small rock off its southern extremity. This peninsula is narrow and forms the bay Mbweny on its east, two miles and a half deep, and half as wide, but very shallow. There is a considerable ridge of hills extending from Kizimkaz northward.* Ras Mbweny is in 6° 24′·75 S., 39° 27′ E.

From Ras Kizimkaz the shore of the eastern coast trends north-east for five miles, and north for two miles, and so far is cliff; the coast thence takes a N.b.W. direction to Ras Chuaka, and is a sandy beach and shore all the way, or upwards of six leagues. Ras Kizimkaz or south point of Zanzibar is in 6° 27′·7 S., 39° 32′·8 E. Zanzibar south-east cliff, north extreme, is in 6° 22′ S., 39° 36′·7 E.

From Kizimkaz a reef covers the shore from half a mile to a mile off, and from that part where the cliff ends seven miles from Kizimkaz, the reef dries with the tide as far as the isthmus of Chuaka.

* Which is called emphatically Mbweny, which name was applied to the point and bay by us.

(To be continued.)

NAUTICAL DESCRIPTION OF THE COAST OF CHINA.—HAETAN ISLANDS TO THE NORTHWARD, *including the River Min.—By Captains Kellet and Collinson, R.N.*

(Continued from p. 137.)

North 80° east, five miles and a half from the Three Chimneys, and S. 65° W., seven miles from Turnabout island, is a very dangerous shoal. Vessels coming from the northward intending to enter the harbour after passing Turnabout, should steer for Triple island, passing within a mile of it, being very careful not to approach the south point of Haetan too close.

Turnabout island is in lat. 26° 26′ N., and long. 119° 58′·7 E.; it is distant from the nearest or south-east point of Haetan four miles; it has two small islets in its neighbourhood. The channel between it and Haetan is safe. Under the eastern point there were several large junks seen at anchor, and a considerable village. Unless this anchorage gives good shelter, there is no bay on the eastern coast of Haetan that vessels ought to enter, as they are strewed with rocks and shoals. Under the high peak of Haetan, and to the eastward, is a bay that was entered by the surveying vessels *Starling* and *Plover*, in a strong north-easterly wind, out of which they were glad to get, and lucky in having escaped getting ashore; but the entrance into it and the anchorage are full of rocks, with a heavy swell when blowing hard.

The high peak of Haetan is in lat. 25° 35′·7 N., and long. 119° 51′·3 E., and its elevation above the sea 1,420 feet. The north coast and the northern entrance of the straits, as seen from the peak, presented to view many rocks and islands, which would always render the entrance from the northward, and the navigation of the straits extremely dangerous. The White Dog islands bear N. 14° E., twenty-three miles from the peak of Haetan.

The White Dog group, called by the Chinese Pihkiuen, has two large and one smaller island: one mile and a half north-east from the eastern island is a rock on which the sea generally breaks. Anchorage for ships of any draught may be had under the western island in the north-east monsoon. A reef of rocks running off from the western extreme of this island, forming a natural breakwater, affords good shelter close under them for vessels under 18 feet draught:—here whole fleets of Chinese junks anchor during foul weather. As the water decreases gradually towards the island, large ships may approach as convenient (keeping in mind that there is 18 feet rise and fall). H.M.S. *Cornwallis*, Vice-Admiral Parker, anchored here for five days with strong north-easterly winds, and rode easy. The bearings from her anchorage were as follows; west point of north-west extreme, N. ½ W.; village N.N.E.; smallest island, E. ½ S.; eight fathoms at low water.

A large ship ought to approach the island, until the passage between them is shut in by their tangents. One cable off the western point of Village bay on the south side of the western island is a half tide rock. The channel between the islands is safe as the dangers show. The breakwater is in lat. 25° 58′·1 N., and long. 119° 57′ E. The highest peak of the islands is 598 feet above the sea. Fresh water may be ob-

tained here in small quantities. These islands are inhabited by a few fishermen.

Vessels bound for the river Min from the anchorage under the White Dog islands should start with the ebb tide. The entrance bears N. 55° W., eight miles and a half from the breakwater. When this distance has been run, a good look out must be kept from the mast-head for Rees rock (a small black rock about 20 feet high,) on the southern side of the channel, which will be seen bearing N. 71° W., four miles and a half. This will place the vessel about eight miles from the land. The channel between the breakers is two miles across at the entrance, and gradually decreases to half a mile. There is a remarkable sharp peak on the north bank of the river, and a square peak on the south bank nearer than Square peak; and to the southward of it Round island will be seen, and to the southward of that is a sharp sandy peak bearing about S. 68° W. This latter may be mistaken for the sharp peak of the north bank of the river, unless the bearings of the White Dog group be referred to.

Eastward of the north horn of the channel is a dangerous reef, which shows at low water. The bearings on it are, Matsoo shan peak, N. 54° E.; Sea Dog, N. 88° E.; W. White Dog peak, S. 45½° E.; Sand peak, S. 59° W.; Sharp peak, N. 71° W.; and Rees rock in line with the south peak of Square peak island. The best mark to keep to the southward of it, and for entering the channel, is to bring Rees rock in line with Square peak bearing N. 81° W. There is a small knoll with 2¼ fathoms on it at low water, in the centre of the passage; it bears S. 86° E., three miles and a half from Rees rock, and the above leading mark will keep you clear of it.

Having entered, steer so as to pass one mile north of Rees rock; the breakers will show on each side of the channel, if it be near low water at the time, and there is any swell. Should the breakers show, by skirting the northern shoal a vessel will insure the deepest water. The course from Rees rock is N. 68° W., on which bearing a remarkable pinnacle rock on the north-east side of Hokeanga is in line with a white battery on the northern shore of the Kinpai mun. In going up, keep the two islets called the Brothers on the face of the island of Hokeanga in one. This will carry you in mid-channel until you are abreast of Sharp peak point, when you can haul up N. 55° W. for Temple point, which is on the north bank of the river, and will be known by the trees on it.

In the channel without Rees rock, the depth of water is generally three fathoms. Between Rees rock and Sharp peak point, close to the northern breakers, there is a hole with five and six fathoms, where vessels may stop a tide and find tolerable shelter. Sharp peak point may be passed within a cable's length. The bay west of it is shoal, and under the peak the two fathoms' line extends nearly one mile from the shore. The mud also extends south-easterly from Hokeanga nearly one mile and a half: vessels beating in this passage must, therefore, keep the lead going.

Woga fort is a dilapidated circular building on the top of the first hill, on the island west of Sharp peak. The junks laden with timber lie immediately under it, until the whole convoy is collected, sometimes

amounting to eighty sail. S. 17° W., three cables and a quarter from the Temple, (called Hoktow or Fu-tau,) is a knoll with only $2\frac{1}{4}$ fathoms on it. Sharp peak seen over the lower part of Woga point will put you on it. From the West Brother the mud extends westerly one mile; on its northern edge is a patch of rocks, which are covered at a quarter flood. The West Brother bears from it S. 74° E., and the Temple N. 12° E.

From the Temple to Kinpai mun is not quite two miles W.b.S. There are two islets at the entrance of the passage. Pass between them, and keep over towards the south shore to avoid a reef which lies W.b. S. $\frac{1}{2}$ S. from the northern islet. The channel is not quite two cables' length wide, and should only be attempted at slack tide, for the chow-chow water renders a vessel unmanageable.

Two cables to the westward of Kinpai point is the tail of a sandbank, to avoid which, keep the southern shore close on board; the distance between it and the edge of the bank being under two cables. When abreast of the Ferry House, which is one mile and a half above Kinpai, and on the right or southern bank, edge over to the other shore, passing Wedge islet at a cable's length. Tree point will then be seen on the southern bank. A half tide rock bears N. 9° W., four cables and a half length from it. When on it, the Ferry House is in line with Kinpai point. On the northern shore, after passing Wedge islet, are two rocky points extending nearly a cable's length from the embankment.

This reach runs S.W.b.S. and N.E.b.N. At the distance of six miles from Kinpai mun, the river narrows again to three cables and a quarter, the land rising on each side to 1,500 and 2,000 feet. The town of Min-gan is on the left or northern bank of the river, one mile within the strait. The river continues narrow for three miles, the depth of water being above 12 fathoms, and in some places no bottom at 29 fathoms. Vessels will have some difficulty in getting through this strait with spring tides, unless with a leading wind, in consequence of the chow-chow water. Rather more than half a mile above Min-gan, and on the same side of the river is an islet crowned with a fort.

The banks of the river on each side are steep cliffs with many batteries. At the upper or south end of the gorge, are two islets on the right bank of the river. In going up leave these islands on your larboard hand, passing close to the northern one of the two, to avoid a shoal patch of $1\frac{1}{2}$ fathoms, which lies two cables W.N.W. from the island. Having passed this island, keep along the right bank gradually hauling up for the pagoda Lo-sing tah. When you have passed the low point of the island on which it is situated, anchor east of it. S. 12° E. from the pagoda, rather more than two cables, is a sunken rock which shows only at low water spring tides. It is recommended to pass close to the pagoda, if vessels intend proceeding up higher, but as the river is only navigable for vessels three-quarters of a mile beyond the pagoda, and the channel is not only narrow, but the tides are stronger, it would be advisable not to go above it.

Above the pagoda, the river turns abruptly to the north-west. The city of Foochow foo is situated on the left bank of the river, nine miles above the pagoda; the distance to the city, by the river, from the rocks

at the entrance is not quite thirty-four miles. Four miles below the city, the river is staked half way across, and the remainder rendered difficult even for junks to pass, by large piles of stone which are covered at high water.

Due north of the Western White Dog is a large island called Matsoo shan, and between the two, N. 14° E. E. from the White Dog, is a precipitous black rock, about 60 feet high with reefs about it, called the Sea Dog. Between the Sea Dog and Matsoo shan there are two other reefs, which are never covered. There is also an island off the eastern end of Matsoo shan, with a reef running off its eastern point. Shelter may be had under this island from the north-east monsoon. There is a deep bay on its north-western face, where good shelter may be had from the north-west monsoon. From the peak of this island, the reef at the entrance of the Min river bears S. 54° W., seven miles and a quarter. In the northern, and also in the western sandy bays, fresh water may be obtained.

North-east, three miles from Matsoo shan, is another large island called Changche shan, with two very remarkable sharp peaks on it; the highest is elevated above the sea 1030 feet, and in lat. 26° 14′ N., and long. 120° 1′·7 E. The bay on the south side of this island affords good shelter in the north-east monsoon. Vessels entering from the northward may round the south-eastern horn of it close, and anchor within the point in 6 fathoms.

Vessels bound to the river Min, should anchor here, as from this anchorage in the north-east monsoon, they may always get to the bar at the precise moment they require it, but from the White Dogs a vessel will barely fetch. After a little intercourse pilots might also be obtained, as there is a large fishing population on it. The coast inside these islands, and north of the Min, (Tinghae bay,) has not been examined; but from Matsoo shan peak several rocks and numerous islands were seen.

On the northern face of Changche shan are several islands, the largest of which bears north two miles and a half. There is no safe passage between these islands. N. 61° E. from the south-west point of the same island are three peaked rocks, called the Trio rocks, about 50 feet above the sea, between which and the point is a safe channel. Care must be taken in approaching these islands from seaward to avoid Alligator island, (called Tungsha); it is due east of Matsoo shan peak twenty-four miles and a half. From the south extreme of the White Dog island, it bears N. 62° E., twenty-five miles and a half; it is in lat. 26° 9′ N., and long. 120° 25′.7 E., about 40 feet above the level of the sea, and is a flat barren rock.

N. 56° W., twelve miles and a half from Alligator island, is a small rock, called Larne rock, with one awash two cables to the northward of it. It bears from the high peak of Changche shan N. 80° E., and is distant from it eleven miles.

N. 11° E. from Larne rock, distant five miles and a half is Larne islet; it bears from the high peak of Changche shan N. 58° E., fourteen miles. It is about 200 feet high, with large boulders sticking up here and there. Near the summit are three houses, and off its northern and southern ends are ledges of rocks. N. 72° W. seven miles

and a half from Larne island, and bearing from Changche shan peak N. 25° E., eleven miles, is another patch of rocks, about 40 feet above the sea.

The peak of Tung Yung bears from Larne islet N. 84° E., distant fourteen miles, and is the easternmost island on this part of the coast; the highest part of it is in lat. 26° 23′·2 N., and long. 120° 31 E., and elevated above the sea 853 feet. Its appearance is level and flat, topped with steep cliff shores; off its south extreme is a ledge of rocks. There is another island half a mile to the westward of it. They appear however as one, except on a N.E.b.N. or S.W.b.S. bearing. Under this island there is good anchorage during the north-east monsoon. North, half a mile from the eastern point of the western island, is a sunken rock. Tung Yung has a large village and fishing establishment on its western side.

N. 68° W., twenty miles from Tung Yung, is a remarkable conical island; it has a reef off its north-east point; with this exception the channel between it and the two islands north of it is safe and two miles wide. West of it four miles and a half is a large island (Spider island) with good shelter from the north eastern winds on its western side. The highest part of the island is 620 feet above the sea; the other peaks of it are nearly the same height. There is a large village in a bay on the south side of it, and off the south-west point is a reef. On the north-east face of it are four islets, and one on the north-west, between which and Spider island there is a half tide rock. To the westward are many islets and rocks.

Four miles north-east of Spider island, is a large island, with two remarkable cones on its northern end, called Double Peak island; it is three miles and a half long, and its highest peak 1190 feet high. There is very good anchorage, the best being under its southern point, the two small islands north of Cone island sheltering you from the eastern swell. Between it and the main, there is a good channel, three miles wide, whose depth varies from 6 to 18 fathoms. The mainland to the westward of this island is high, with very remarkable conical peaks, and much indented. Water and a few vegetables may be had here.

N.E.b.E., ten miles from Double peak, is a group of islands called Pihseang shan or Tsihsing. The northern one is the largest. There is at the south-west angle, a small bay which would afford shelter to two or three small vessels. This is a Chinese vice-admiral's station; when the surveying vessels visited it, there were three war junks at anchor in the bay. Between the northern and the southern islands of this group, there is a safe passage, but the bay is thickly studded with fishing stakes. The northern island is in lat. 26° 42′·5 N., and long. 120° 22′·7 E. The southern, which is a detached rocky island, is about 60 feet above the sea, in lat. 26° 32′ N. Between this group and the main, the average depth of water is 9 fathoms.

Due north, twelve miles from the Pihseang shan group, is a high island called Fuhyaou shan 1700 feet above the sea, with a good harbour between it and the main; it is in lat. 26° 56′.1 N., and long. 120° 22′·6 E. The entrance to the northward is broad and open; the south-eastern channel is only one cable wide. Good water is plen-

tiful and easily obtained here. N. 60° E., five miles from Fuhyaou shan, is a group of small islands affording no protection, but having no danger near them. And N. 13° E., five miles and a half is a solitary islet having a reef off its eastern end. The south-western entrance to Fuhyaou shan harbour will probably be found better than the eastern; it has not however been yet examined.

S. 74° E., ten miles from Fuhyaou shan, and N. 45° E., fifteen miles from Pihseang shan, is a very dangerous rock, over which the sea breaks; it is in lat 26° 53′ N., and long. 120° 34′·3 E. N. 80° E., sixteen miles from the eastern point of Fuhyaou shan, there is a small group of islands called Tae shan (*i.e.* Table hill); the easternmost large island (remarkable for its table top) is situated in lat. 25° 50′·5 N., and long. 120° 44′ E., and is 618 feet above the sea. S. 25° W. from Table island are two rocky islets, about 100 feet high, and which are almost joined. There is bad shelter to be had between the two largest islands, as close (half a cable or less) to the Table island as a vessel can with safety go. There is a passage between the two islands, and to the north-east of the western large islands there is a most remarkable mushroom rock, about 260 feet high, and joined to the islands by reefs at low water. There is an indentation on the eastern face of the middle large island, that affords shelter to a number of small fishing junks.

N. 60° E. seven miles and a half from Table island, are three small rocky islets, with several rocks awash near them. Three miles to the N.N.W. of these is another rock, about 50 feet above water, and is remarkable from its being cleft in two. To the westward between this group and the harbour of Pihquan, there are also several rocks which only show at low water. From the number of rocks and shoals about these islands, all of which may not yet be discovered, it will be necessary for vessels to approach this part of the coast with great caution, or indeed to avoid it in this latitude altogether.

N. 45° W., fourteen miles from this group, is the island and harbour of Pihquan; it is in lat. 27° 9′·7 N., and long. 120° 32′·6 E., and will afford good shelter in the north-easterly monsoon for vessels drawing 15 feet.

Three-quarters of a mile west of the south point of Pihquan is a rock nearly level with the waters' edge, with a reef that is covered, half a cable's length to the north-west of it.

This roadstead is one mile and a half broad, and has 3 fathoms on it. Fresh water may be got in the sandy bay at the foot of the Three Chimneys on Pihquan.

To the westward of the roadstead is the island of Namquan, within which is a deep bight, and a walled city. To the northward of it on the main is a most remarkable peak, called by the fishermen Pihquan peak. The boundary line of the provinces of Chekiang and Fukien, passes through Pihquan harbour.

N. 35° E., distant thirty miles from the Taeshan group, is a group of islands, the largest of which is called by the Chinese Namke shan. It consists of one large and fourteen smaller islands; the large island is 737 feet above the sea, and has a good harbour on its south-eastern side in the north-east monsoon, where there is a good watering place.

The eastern horn of the harbour is in lat. 27° 26′·13 N., and long. 121° 6′·6 E. Vessels should not pass between the islets which form the south-west part of the group, as there are many reefs which cover at high water. The westernmost island makes like a cone, and has reefs to the northward. The southern islet is a castellated rock, and is distant from the rest of the group five miles.

W.b.S., twenty-four miles from Namke shan, on the main, is an apparently good harbour, and most probably is that called Pepa shan on the Admiralty chart.

N.N.E., ten miles, is a group of islands, the largest of which called Pihke shan, in lat. 27° 37′ N., and long. 121° 12′ E. There are four small islets close to it, which protect the anchorage off the south-west end of the island from the easterly swell. Vessels should not anchor under these islands unless from necessity, as they have so much better anchorage either to the northward or southward of them. Fresh water may be obtained. There is an extensive fishing establishment on the island.

West, eleven miles from Pihke shan, is another group, of one large and four smaller islands. The largest is called Tungpwan shan, (*i. e.* Brass-basin I.) Between this group and Pihke shan are five detached islets. The main is distant fifteen miles to the westward of Tungpwan shan, the hills rising to 1000 or 1200 feet, with extensive plains between them, which are protected from encroachment of the sea by embankments. Between it and the main there are two groups of islands, under which a fleet of junks probably from Wanchow foo took shelter during a north-easterly gale.

Eight miles, W.N.W. from Pihke shan, are the Tseigh islands, of which there are three, the North Tseigh, the South Tseigh, and the East Tseigh, in the space between which there are clusters of rocks interspersed with reefs, which cover at half tide. Vessels cannot go between these groups without great risk, as there may be many rocks not yet laid down.

(To be continued.)

The West Coast of Africa South of the Equator.

By Com. H. J. Matson, H.M.S. Waterwitch, 1839-43.

(Concluded from page 132.)

River Congo.—The short and simple directions for entering this river by Captain Owen, are the best that can be given. When the sea breeze is not sufficiently strong to enable you to stem the current, you may steal round Shark's point, by keeping as close as possible to the point (within twenty yards.) At half flood the current slackens, and an eddy sometimes runs up close to the shore.

In the stream of the Congo, unless with a commanding breeze, a vessel becomes quite unmanageable, owing to the strength of the superficial or upper current, and will not answer her helm unless going five or six knots. If, when endeavouring to enter the Congo, you are driven over to the Mona Mazea bank, anchor instantly you gain soundings,

or you may be driven on shore. On the left bank of the river, about five or six miles below Scotchmans Head is a shoal not laid down in Capt. Owen's chart, every man-of-war that has attempted to enter thus far has struck on it. The hand lead gives you no warning as the water suddenly shoals from seven to two fathoms.

Kabenda or Cabinda.—Is the most notorious slave-trading place on this part of the coast; all slaves collected in the river Congo and neighbourhood are sent here for exportation. There is a dangerous shoal about four and a half miles N.b.E. $\frac{1}{2}$ E. from the town of Porto Rico, on which the sea sometimes breaks; it is not noticed in the Admiralty charts or books of direction. There is also another shoal to the southward and wesward of Kabenda point. In approaching Kabenda from the northward you should not haul in for the bay until Porto Rico (a conspicuous town on the hill) bears to the eastward of south, and when approaching from the southward not until Kabenda point bears south-east. These two bearings will lead you clear of the shoals, and you may thus approach Kabenda point and anchor at any convenient distance. If desirous of entering the bay, or inner anchorage, you should bring Kabenda point to bear S.S.E. or S.E.b.S., then steer directly for it until you shoal your water to three fathoms; you will then be on the south side of the entrance which is very narrow; you may then steer along the south shore into the bay giving Kabenda point a berth of three-quarters of a mile. The best berth in the inner anchorage is with the Western Factory S.W., Porto Rico S.b W., and the extreme point W. $\frac{3}{4}$ N., in three and a half fathoms; there is also good anchorage in the entrance of the channel in four and a half fathoms, with Porto Rico bearing S.b.E., and Red Point S.W. $\frac{1}{2}$ W.

In the offing you may anchor at any distance, and in thirty-five fathoms, out of sight of land.

To cross the stream of the river Congo from the northward, it is requisite either to go 200 miles off shore, or to keep in anchoring ground. I always choose the latter. If you are not certain of getting across the stream before the sea breeze dies away, anchor on the Mona Mazea bank in six or seven fathoms, until the following day, when a two hours' sea breeze will take you to the southward of Sharks point, and you are then out of the influence of the stream which always runs to the N.N.W.

Loango Bay.—Is known by a remarkable wood to the southward, or by the red cliffs to the northward; great care is requisite in approaching this bay from the southward, as there is a shoal off the south-west point with only two fathoms. To enter the bay you should bring the factory houses to bear south-east; then run in until you shoal your water, which you do almost imperceptibly, and anchor at any convenient distance.

The fresh water here is very good, as it filters through the rocky mountains. The most convenient anchorage for watering is with the south point bearing S.W.b.W $\frac{1}{4}$ W., and a clump of trees on the hill S.E.b.E. $\frac{1}{2}$ E., in three fathoms water. But I would not recommend a vessel to come quite so close without having previously sounded the bay.

Stock of all kinds can be procured here on very reasonable terms.

On Captain Sumner's Method of Determining the Position of a Ship.—*By Lieut. H. Raper, R.N.*

Sir.—A small work has lately been published in America, entitled "A new and accurate method of finding a Ship's Position at Sea, &c., by Captain Thomas H. Sumner.—Boston 1843." This method consists in a new use or application of a single altitude observed for the long. by chronometer, and as the suggestion is highly ingenious, and very useful when the ship is near the land, it will be rendering a service to our seamen, few of whom can yet have heard of it, to make it known to them in the pages of the *Nautical Magazine*.

Instead of proceeding to describe the method in general terms, we shall, in order to convey a clear idea of it, at once take a case.

Suppose a ship on entering the channel obtains in the forenoon a single altitude, her lat. by acc. being uncertain, and the error of the chronometer (which she must be supposed to carry,) being known. Suppose the lat. by acc. is known or presumed to be not less than 50° N., nor more than 51° N., and let the long. as calculated for the lat. 50° be 9° W., and let that for 51° be 6° W.

Now, it might appear, upon a superficial view of the question, that the ship's place might be any where, indifferently, between the parallels of 50° and 51°, and the meridians of 6° and 9°; and that the only result of the observation of a single altitude would be that the ship was proved to be confined between these meridians. But this is not the case; for to each point of latitude (with the given altitude) there will correspond a certain point of long. and no other, thus, to the lat. 50° corresponds the long. 9°; to the lat. 50° 10′, there would correspond a long. not far from 8° 30′; to the lat. 50° 20′ there would correspond another long. less than 8° 30′; and so on, and the several points laid off on the chart, in their respective lats. and longs. would be found to lie on a line slightly curved, that is, on a line, which for practical purposes on small portions of the chart, not exceeding 2° or 3° in extent, might be considered as straight. If, therefore, the chron. is right, (or its error correctly known,) and if the lat. assumed is not very greatly in error, the ship must be somewhere *upon the line* drawn on the chart joining her two positions on the assumed parallels.

If this line, being produced, passes through any point of land, the bearing of this land from the ship is shown. And thus, though neither the latitude nor the longitude of the ship is correctly known, yet the *true bearing* of any point of land which lies in the direction of either end of the line joining the two positions is certainly known, provided that the lat. by acc. is not very grossly in error.

A line drawn perpendicular to the above-mentioned line, towards the side on which the sun is, shows the *true azimuth* of the sun. This is easily understood; for the several latitudes and longitudes laid off by means of the same alt. constitute *a curve of equal altitude*,* and it is obvious that the observer in moving so as to keep the sun at the same alt. would keep him always on the bearing at right angles to the direction of his own motion.

* The curve of equal alt. is a small circle, and the pole of this circle is the point over which the celestial body observed is vertical.

It is evident from the above that a single altitude taken at any time of the day, even when the latitude is uncertain, may be an observation of great importance when the ship is near the land or a danger. The process of calculation consists merely in computing the long. by chronometer from two assumed latitudes, differing 20′, 30′, or even 1° from each other, with the same alt. and polar dist., and then drawing a line on the chart through the two positions. We shall quote an example given by the author, but as the computation of the long. is performed every day by every seaman who carries a chronometer, it is not necessary to give the work at length.

"Dec. 17th, 1837, at 10h. A.M., lat. by acc. 51° 37′ N., true alt. Sun's cent. 12° 10′, the chronometer showed 10h. 47m. 13s. The reduced decl. is 23° 23′ S., equat. of time 3m. 37s. The first hour angle computed with lat. 51° is 1h. 43m. 59s., which gives long. by chronometer 8° 42½′ W. The second hour angle computed with lat. 52° is 1h. 28m. 28s., which gives long. 4° 49½′ W.

"A line drawn through these positions, viz., lat. 51°, long. 8° 42½′, and lat. 52°, long. 4° 49½′, lying E.N.E., and W.S.W., true, is that on some point of which the ship is placed, and passes through Small's light, thereby shewing the bearing of the light, wherever the ship may be, within the given limits.

"This projection on the chart shows at once that 1° or 60′ error in the lat. will produce, in this case, (8° 42½′—4° 49½′ or) 3° 53′, or 233′ error in the long by chronometer, or that 10′ error of lat. causes the long. by chron. to be in error 39′.

"The line drawn towards the south-east quarter perpendicular to the above line shows the Sun's true azimuth S. two points E., or S. 22½° E.†"

The method was found out, as it appears (p. 38,) by accident. The ship bound from Charleston to Greenock, having after a continuance of boisterous and thick weather arrived on the night of Dec. 17th, 1837, within forty miles of the Tuskar light by the reckoning, every effort was made to preserve her position until daylight, as the coast of Ireland had become, with the wind at S.E., a lee shore. At 10 A.M. next day an altitude of the sun was observed, and the long. by chron. found. But no observation having been obtained for several days, the lat. could not be depended upon, and another lat. was assumed in order to see where the second result would place the ship. It was found thus on trying three latitudes, differing 10′ from each other, that the three positions of the ship were all disposed in the direction of Small's light, and it was, therefore, concluded that, though the absolute position of the ship herself was doubtful, yet that the true bearing of Small's light was certain, provided that the chronometer was correct. Accordingly the lighthouse was made in the course of an hour, and the lat. by acc. was thus ascertained to have been in error 8′.

The effect of an error in altitude is easily shewn by considering that the place of any point of the circle of equal alt. on the chart moves one mile for each 1′ of error of alt.; and thus the corrected position of the line will be parallel to that already down and distant from it the amount of the error of altitude.

† It is shorter, and no less correct, to compute the hour angle, and thence the longitude by chronometer to the lat. by acc. and then to find the azimuth (by sines as directed in the approximate method of double alt. in the Practice of Navigation). The azimuth being laid off from the given position of the ship on the chart, towards the sun, the line perp. to it is that on which the ship is.

When the coast trends parallel to the line of equal altitude, the distance of the ship from the shore is ascertained, though her absolute place is uncertain, provided always that the ship is really not far from her supposed latitude and that the chronometer is right.

When a single altitude is observed near noon, the parallel of equal altitude is evidently near the parallel of lat. on which the meridian alt. would place the ship, and the bearing of land nearly east or west is accordingly, very nearly ascertained. On the other hand, when the sun is near east or west, the line of equal alt. lies nearly north and south; and its absolute position in longitude depends entirely on the chronometer; hence the bearing of land near north or south would be uncertain. Also errors of alt. affect the time most when near noon, in which case the correctness of the longitude has no influence on the bearing of land near east or west.

As a single altitude gives thus the line on which the ship is, so a second altitude gives a second line, and the intersection of the two lines is the true place of the ship. The ship's place may thus be obtained by projection on the chart instead of the calculation of a double altitude.

It is obvious that the place of the intersection is more decisively marked as the two lines lie more nearly at right angles to each other; and as each of the said lines is perpendicular to the direction of the sun at each observation, they will cross each other more nearly at right angles, when the sun's azimuths at the two observations differ most nearly by 90°. The projection therefore affords evidence, of the simplest and most convincing kind, that the value of a double altitude depends altogether on the *difference of azimuth*. This condition which is the true criterion, and which, I believe, was first pointed out by Dr. Inman in his Navigation in 1826, has nothing to do with the time from noon, which the more popular works reiterate as the proper limiting condition of the double altitude, to the great detriment of the extensive and successful practice of this important observation.

When the ship changes her place between the observations, the first line projected may be reduced to the place of the second observation, by laying off, from any point of it, the course and distance made good (true), and drawing through the point so obtained a line parallel to the first line projected. The reader will see his way clearly on projecting a few cases.

The simplest method of projecting the complete curve of equal alt. on the chart is to find the longitude by chronometer for each 1°, 2°, or more of latitude, according to the degree of minuteness proposed, and then trace a curve line through all the points projected, by hand. Several cases are exhibited on the plate in Capt. Sumner's book.

As the method arises out of the employment of the chronometer, it may be said greatly to enhance the utility of that instrument.

I am, &c.,

H. Raper.

To the Editor, &c.

Voyage of H.M.S. Thunderer to the Mauritius and Back.
Notes by Mr. H. Davy, Master R.N.—1843.

(Continued from p. 145.)

During our stay we witnessed the arrival of six thousand free labourers, they came in twenty-eight vessels, large and small, from ships of 800 tons to 250; they were mostly country ships, and very queer ones some of them appeared to be; they also had an immense quantity of rice to land. The emigrants or free labourers were as follows, viz.:—5,746 Coolies, 468 Chinese, and 186 Malays, amounting to 6,100 persons. These made 50,000 who had landed at Port Louis since the emancipation of slavery; and, it is said, that as many more may be had if required, and probably to work the estates effectually they will be. The Chinese are said to be the steadiest and most industrious. The Bengalese are all over the island working on the plantations, or employed as servants, clerks, boatmen, fishermen, &c. The harbour and steam duties are done by Lascars, and it does not require a great stretch of imagination to fancy one's-self in the Hooghly.

In consequence of the hard cash which the major part of these people take with them on their return to India, and the fortunes which are taken to Europe, there is a great premium on gold and silver; the current value of a sovereign is twenty-three shillings, and the premium on silver is 6 per cent.

The Town.—The actual town of Port Louis does not appear to have increased much, although the houses are now getting to be built of stone, and are larger and more airy than those of the old French style; but the suburbs where the free people of colour mostly reside, and these motley masses of strangers locate themselves, have spread out to a great extent both to the south-west and north-west like the horns of a crescent, and give the place the appearance of considerable magnitude. The citadel stands on the top of a hill, which is of moderate elevation, and situated just in the rear of the town; it is but recently completed, having been commenced in 1832, and was constructed entirely by the military, to whom, it has been said by competent authority, much credit is due for the strength and durability of the building, and for its completeness as a fortress; it mounts sixteen heavy guns, beside a mortar battery, is casemated and provided with water, provisions, &c., sufficient for the support of its garrison. It appears singular that the site was not earlier taken advantage of, as it commands the town and its approaches; and is also a cool healthy place for the troops.

From the top of the citadel there is a fine view of the surrounding country; a high range of mountains appears nearly to encircle the plain of Port Louis, which, except the Champ de Mars, is covered with the town, its environs and villas. The coast line for several miles, with the depths and shoals of the harbour are clearly defined, and the coral reefs are seen to spread over a large space, narrowing the channel and threatening at no distant day to block up the passage. A rough sketch of these dangers taken at low water may greatly assist in a knowledge of the pilotage; the channel can then be traced in its winding course

out to the bell buoy, and the limits of the outer reefs are plainly marked. As to the diminution of objects, and the view of the streets, court-yards, in fact, everything but the interior of the houses, reminded us of looking down from the dome of St. Paul's. It was in the middle of June that a few of the Thunderers, when seated on the battlements of the citadel, were tendered, by a very civil soldier of the 35th regiment, the use of a glass, which was very acceptable; and we sat spying about and enjoying a cool refreshing breeze; for, although it was early winter, yet to us the streets were sultry and oppressive. There were gay scenes going on below, but very opposite in character; the Fête de Dieu was celebrating, and in the street and all round the cathedral there appeared to be a great mass of people. Flags, rich canopies, rows of young girls, and a blaze of bright colours were all we could see. Ship-loading and commercial bustle was going on towards the sea; a number of Chinamen had collected round the joss-house, and the Champ de Mars was all alive, marquees were pitched, and a cricket-match was being played—the soldiers and sailors against the club; the latter won, and we were all down at the close, a lunch of course, where was a profusion and elegance, indeed every delicacy that the island could afford. It was an exceedingly well got up thing, and spoke well for the hospitality of the worthy host who was considered one of the best bats of the club. The beat was a great crow, as the losing side had recently been the victors at Cape Town. The tiffin over we made a visit to the tombs of Paul and Virginia, which is a pleasant drive of about seven miles over a very fair road, taking the botanical gardens *en route*. As to the tombs, further than that it is the scene of a delightful fiction, there is nothing worthy of notice.

The joss-house closed the day's sight seeing, and worth a look at certainly, if it was only for the ridiculous appearance of every thing within,—joss-sticks in hundreds, chinese writing on the walls, altar-piece, &c., and several transparencies with lamps; two pictures were over the door, on what subject may it be supposed? why mail coach scenes, one just starting from the Bull and Mouth, or the Golden Cross, I forget which; the other was going it in prime style. There was also a Marine painting, and the fat priest was on the flat of his back sound asleep; the idea of such a place having anything to do with religion amused us somewhat.

The omnibus has been a great benefit wherever it has been introduced, and equally so is it at the Mauritius, where increased facilities are now afforded of travelling on its great roads. One goes to Mahebourg, another to Savana, while a third goes to Poudre d'Or; and other lines are also in use. Thus a person has an opportunity of seeing a little of the interior of this lovely island, which for richness and varied scenery, may vie with any in the world.

The affair at Grand Port gives an interest to that place, which will be an enduring one as long, I suppose, as we have a Navy. It forms, indeed, an important page in our history, and as Isle de la Pau, and the harbour shoals are clearly before us, what thoughts and regrets pass through one's mind. If a buoy had been there, and again on that spit, and thus the battle is fought, and will no doubt be fought over again and again. The loss of four frigates is undoubtedly a great loss, but

I think the regret that one feels is, that they did not reap the great glory that appeared to await them.

By an oversight Mr. Montgomery Martin in his history of the colonies, writes of this naval engagement as having taken place at Port Louis. The error is continued in the late edition, which I hope will be a sufficient excuse for my having noticed it.

The distance to Grand Port is thirty miles across the country, over a good road and amid some interesting scenery. Mahebourg the town of Grand Port is the second principal military station, and one regiment is stationed there; it is the windward port, and the trade wind blowing in, renders it a much more desirable station than Port Louis; the thermometer shows a considerable decrease of temperature, and during the hot months it is a valuable recruiting station, and is much coveted by the soldiers. The objection to Grand Port as a place of trade was the difficulty of getting ships out in the face of the breeze. Steam gets rid of the objection, and it would be expected that advantage would be taken of such a fine harbour, and so salubrious a climate.

Steam.—The intercourse with the mother country is at present very protracted, ninety days being considered the average run out or home. The homeward passage is mostly cared for, and is generally to be undertaken in deep-laden sugar ships. There is an old saying connected with our Indian possessions, that people arrive out like lions, but return like lambs; and hence we may understand the primary thought that is given to comfort and convenience. A few persons proceed home viâ India, but there is an uncertainty attending it, and having reached Bombay or Madras, there is then a chance of catching the steamer, or, to wait a month for the next.

A branch steamer to Aden appears to occupy the attention of the merchants. It would, no doubt, be attended with most important results in opening up the resources of our colonies in these unfrequented seas. The Seychelles which appear to possess such capabilities as would rival the famed spice islands of the east, lie in the route, and by making Port Elizabeth the steam station of the Cape colony, a communication, including Port Natal, could be established on the same line.

Climate.—The sun in his journey towards the southern tropic, passes and repasses; and appears, as I have heard it remarked, to linger over the island, his scorching rays and fervid heat, being scarcely bearable. This is during December, January, and February. But the winter months, June, July, and August, are very pleasant, although quite warm enough then in the day time. The thermometer during our stay ranged from 73° to 79° on board the ship, but on shore it was always two degrees higher; in the sun it was 122° on a very bright day; the surface water was 74°, and the barometer was steady at 30·10.

There were several vessels at this time undergoing extensive repairs, and others were condemned from injuries sustained in a severe hurricane that happened in April: it appears that this destructive storm passed over Rodrigue from the N.N.E., and continued in a S.S.W. course, thus clearing the Mauritius. There were fourteen English ships caught in it, some very large and richly laden, and they were all in a bad state, all but foundering; some were without masts, others without rudders,

and in a most shattered condition. Fortunately there was a safe haven to leeward, where they arrived

"Lean, rent, and beggar'd by the strumpet wind."

A great number of our soldiers returning from the eastern wars, after long and severe service, were caught in this tempest; the remnant of the ill-fated 44th, with the women of the regiment, were among those who suffered most; the ship was on her beam ends, dismasted, and in imminent peril of being ingulfed; it was even more terrible than Akhbar Khan and the Cabul Passes, where their regiment so miserably perished. Their escape from shipwreck was indeed a most providential one.

The 41st another Affghan regiment was equally unfortunate; one wing reached Port Louis in a ship of 800 tons, called the Margaret, she was dismasted, with loss of rudder, and a damaged stern post. How valuable then is the Mauritius as a place of refuge lying as it does in the direct track of homeward bound ships from every part of India and China.

The appearance of the men of the 41st whom I saw at Coopers Island was that of veterans who had seen hard and toilsome service; they were spare and sinewy, with iron looking faces, and complexions like red Indians. An intelligent fellow one day as we were taking sights, recounted a few reminiscences of his campaigns; it reminded one very much of Jack's yarn o' the wars and wind up on shore; for two years they had lived under tent, the weakly had all died, and those left were as hard as nails; they had fought all through Affghanistan, and stood at bay at Candahar, at length they advanced, reconquered, and were finally shipped on the Indus *en route* for home, after twenty-one year's absence. On their way down they heard the guns in the attack and capture of Hyderabad, and of course were full of regrets at not being able to join in. However, they passed safely out of the river, were tossed about in the hurricane, but fortunately got into Port Louis; there in the words of the Chinese Imperial High Commissioner Keying, they got drunk in the joy of their hearts; but unfortunately there was no one to put them to bed, and so the land sharks walked off with the rupees.

The money was now all gone, and they were again the fine steady soldiers, willing and ready for any service. Those who had been placed on the look outs in the Affghan defiles, were now as quietly on sentry at Coopers Island as if no change of time or circumstances had intervened. This guard duty with drills, and their favourite game of fives, appeared to fill up their time. It is a fortunate circumstance that the British soldier should be so attached to these fine athletic games. Whether there be courts or not, it matters little, for they quickly find a stone wall, and throughout our extensive empire, from Canada in the west, to Chusan in the extreme east, the same game prevails. It attaches the men to their barracks and fills up the spare time. These soldiers who put into Port Louis in distress in April, I believe did not get away before August, such was the extent of damages, that all this time was necessary to get the ship again ready for sea.

French acquisitions.—It is not surprising that the inhabitants of the Mauritius, who draw their supplies from Madagascar principally, and adjacent countries, should feel jealous, and be keenly alive to any foreign encroachments on these places, and hence a great deal was said about the French having very recently taken possession of Mayotta, one of the Comoro Islands. It appears that it affords safe anchorage for a fleet, and is a port for colonial trade. The French have possession also of Nos Beh, and great ideas are entertained that an attempt is about to be made on some part of Madagascar.

June 20th, the accession day of our Most Gracious Queen. At early dawn the 87th Royal Irish Fusileers marched through the streets of Port Louis for the last time, the band playing the regimental march, St. Patrick's Day in the morning. The Prince Albert steamer came alongside, and the regiment were all embarked on board the *Thunderer* by 8 o'clock, at which time Her Majesty's ships, merchant vessels of various nations, the forts and consulates were all decked out with flags in honour of the auspicious day. At noon royal salutes were fired, from which time until the hour of our departure arrived, there was a constant succession of visitors, some to see the ship, but mostly to take farewell of their friends of the 87th. The Bishop of the island who is an English Roman catholic, and some priests also of the United Kingdom, were of these, the regiment being all catholics, and had been thirteen years in the colony. The 87th were also at the capture of the island in 1810.

There was a little dispute got up between a few English and French, respecting the ship; the former insisting that the *Thunderer* was the largest ship that had ever been at the Mauritius, and the latter objecting to it. It was, however, decided by James' Naval History, that in 1806 the Marengo of the same size was there, bearing the flag of Admiral Linois.

A gentleman, who was a large landed proprietor, speaking of this gem of an island, mentioned that there were no less than thirty rivers, besides several lakes. How very extraordinary, when we reflect that its circumference is less than ninety miles, and then carry our minds to continential countries, suffering all the miseries attendant on a long drought.

By five o'clock our visitors were all away, the anchor was a-trip, and we sailed from Port Louis for Old England with a fine fair wind, and merry hearts, keeping all our gala flags flying until fairly out of signal distance.

Harwich Harbour.—*By Capt. J. Washington, R.N.*

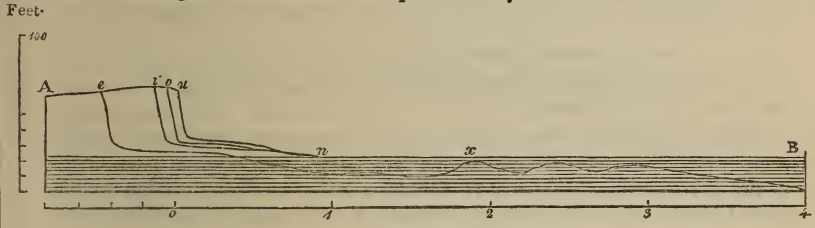
The port of Harwich, owing to its general depth of water, its extent, the shelter it affords, and its immediate communication with the sea, is one of the most valuable on our eastern shores, and although the rivers Thames and Humber afford shelter by running far up them, yet Harwich from its easy access by night or by day, in all weathers, and in

all states of the tide is the only Harbour of Refuge, properly so called, on the East coast of England.

The memorial of the Mayor and other inhabitants of the borough of Harwich states, that in this harbour, which in easterly gales has given shelter to 500 sail of shipping at once, great changes have taken place within the last 20 years owing to the falling down and washing away of Beacon Cliff on the western side of the entrance, and the growing out of Landguard Point on the eastern side, whereby the harbour is already much deteriorated and is daily becoming worse.

To the truth of this statement I can bear the fullest testimony from my own observations during the last two years, and all the evidence I can obtain, goes to shew that the sole and immediate cause of the damage in question is, the digging up and carrying away the cement stone from the foot of Beacon Cliff, and Felixtow Cliff.

From the unanimous testimony of the older inhabitants of Harwich, it appears that Beacon Cliff (which is entirely composed of Blue or London clay with layers of *Septaria* or Cement stone,) has fallen away much more rapidly within the last twenty-five years than it did at any previous time; but not feeling quite satisfied with this evidence I have procured plans of the town and cliff for the years 1709, 1756, and 1804, and have transferred the high and low water lines for these several periods to the plan of Harwich, completed last year in H.M.S. *Shearwater*.



Scale of 4000 feet.

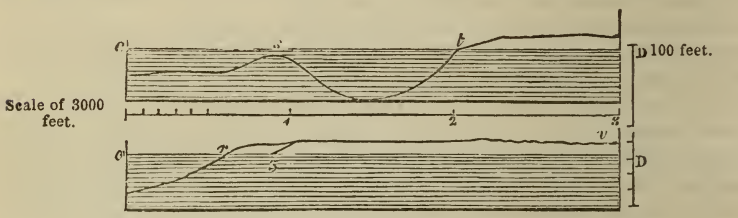
Section of Beacon Cliff shewing the encroachments of the sea, caused by removing the cement stone at its foot.

u n Outline of the Cliff in 1709. *i n* Outline of the Cliff in 1804.
o n Idem. " 1756. *e* Idem. " 1842.
x Cliff foot rock.

From which it appears that in the first half century less than forty feet, or not a foot a year, of the cliff was washed away; in the second half century about eighty feet went to sea; while during the last thirty-seven years the sea has advanced in a direct line upon the land not less than 350 feet; and the beach at the foot of the cliff has been so much lowered that the low water line, during this short period, has gained 600 feet upon the shore; thus presenting on the western side a greater surface of water, whereby the scouring effect of the flood and ebb streams in keeping the channel clear is much weakened; a barrier that tended to shoot the ebb tide over against Landguard Point is removed; full 40 acres of Ordnance, Glebe, and Manor lands, of excellent pasturage, with tenements and other property have been swept away, and the harbour deprived of an invaluable breakwater in southerly and south-westerly gales.

Now, the traffic in cement stone began about the year 1812, or thirty years ago, since which period, I am credibly informed, that upwards of a million of tons of this stone have been carried away from the shores in question. This fact combined with the evidence derived from the plans seems conclusive as to the cause of the encroachments of the sea upon Beacon Cliff.

But while the sea has gained upon the land on the western side of the harbour, the contrary has taken place on the eastern or Suffolk side, where within the last thirty years Landguard Point has grown out 1,500 feet, thereby blocking up the chief entrance into the harbour; so that where in the year 1804 was a channel seven fathoms deep at low water, is now a shingle beach as many feet above high water mark.



Section of Landguard Point shewing its extension since 1804.

s t The usual channel 7 fathoms deep in 1804
r v Shingle beach 7 fathoms above high water in June 1842.
r s Extension between June 1842 and December 1842.

This mischief has been accelerated by carrying away the cement stone from the foot of Felixtow Cliff, about two and a half miles to the north-eastward, where it formed a rocky projecting ledge which served as a breakwater, for the whole of this shore, from the force of the sea in north-easterly gales. But since this stone has been removed (to an extent of 200,000 tons I am told,) a large slice from Felixtow Cliff has gone into the sea, two Mortella towers and a small battery, only built in 1808, have been swept away, and the beach at Landguard Point has grown out as above stated to the extent of 500 yards, in consequence of which the two lighthouses, erected but a few years since at a great expense, are no longer a safe leading mark into the harbour; on the contrary, they have already caused serious damage to several vessels by running them ashore.

These are great and increasing evils, and demand immediate attention, if the port of Harwich is to be preserved.

It is the province of an engineer to point out the proper remedy to take, but the more obvious measure would seem to be to put an immediate stop to the daily practice of carrying away cement stone from the foot of the cliffs, and to replace by an inexpensive breakwater of rough stone run out about 800 yards, the natural barrier which has been carried away from the foot of Beacon cliff, whereby the ebb stream will be again directed against Landguard Point, so as to prevent its extension, and the shelter to the outer part of the harbour in northerly and southerly gales will be restored.

Of the large quantity of cement stone that has been carried away from under Beacon Cliff, I am informed that 200,000 tons have been taken by the Board of Ordnance, and applied to Government uses.*

Mr. James Walker has strongly recommended a pile jetty along the northern face of the town, in which I fully agree; but the interests of Navigation require that some care should be bestowed in preserving and improving the present channel into the harbour. Since the deep water entrance by Landguard Point is lost (certainly for some time to come,) the actual channels should be dredged so as to command a depth of fifteen feet at low water, or twenty-seven feet at high water springs; this would be attended with little expense, as the dredgers now on the spot would gladly undertake the work, for a bounty of 1s. a ton on all the cement stone taken away from the different shoals in the harbour, and there would be no difficulty in pointing where and how this might be done to the greatest advantage.

A small red harbour light would also be required to be placed about twenty-five yards to the southward of the present low light, to obviate the mischief now of daily occurrence, in consequence of the two lights in one being no longer a safe leading mark to clear Landguard Point. The harbour buoys might also be much more advantageously placed than at present,† and two or three small beacons would be required; but the greatest improvement to the navigation of this part of the coast would be a small floating light near the entrance of the harbour, and a fixed light at the tower of Walton-on-the-Naze.

The above recommendations are suggested not only by the increasing trade of the ports of Ipswich and Maningtree, of which Harwich is the outlet, and by the extent of the Government property in the town, but more especially by the present value of this harbour as affording shelter to the vast body of shipping that daily pass along the East Coast of England in winter as well as summer, and the facility with which assistance is rendered from this port to vessels wrecked on the Shipwash to the north-east, and the West rocks and Gunfleet Sand to the south-east, perhaps the most dangerous sands in these seas. It is well to bear in mind what this port was during the last war, and what it must again become for another North Sea Fleet. It was from Harwich that the Hollesley Bay fleet was always watered by transports; it was here that all vessels, from a frigate downwards in case of need came for a partial refit at the Naval yard still in existence; here not less than sixty ships of war have been built, fifteen of which were two-deckers, while the tonnage of the vessels employed in the North Sea Fishery belonging to Harwich, a few years since, was estimated at 3000 tons, employing 500 hardy seamen.

These considerations alone would more than justify any small outlay to preserve this port from further damage, but in addition it should be remembered that this may shortly become the packet station for all our mail communications with northern and central Europe, that as

* The Ordnance have had a cement mill at Harwich, since the year 1818, let the greater part of the time for £500 a year, and now at £300 a year.

† These alterations have since been made by the Trinity Board.—Ed. N.M.

soon as the railroad, already open to Colchester, is completed to Harwich, letters dispatched from the General post office might be delivered in three hours direct on board the Mail Steam Packet lying waiting alongside the pier,—that passengers could walk on board, and in less than a quarter of an hour, be clear out at sea, in all weathers and at all times of tide, and sixty miles ahead, even in fine weather, of those mailed at the same time in London, which would probably make the difference of a whole tide in arriving off Ostend or the Brielle, or other bar harbours, while in north-easterly gales and fogs steamers would often make their passage before those starting from London could get clear of the shoals and currents of the deep gulf which forms the estuary of the Thames; in proof of which twenty-eight steamers, carrying mails, in spite of strict orders to the contrary, have been compelled to put into this port for fuel, or to land their mails, after contending for upwards of twenty-four hours, against strong head winds, which prevented their making their voyage.

Under these points of view then, but chiefly as the Packet Station for all northern and central Europe, (thereby avoiding the less expeditious and less secure transit through France,) the preservation of this port appears to be of national importance.

JOHN WASHINGTON,
Woolwich, January 19th, 1843. *Captain H.M.S. Shearwater.*

FRAGMENTS FROM THE DARDANELLES.

SATURDAY, 1st of October, 1836.—This is our fortieth day from England, the eve of our sixth Sunday at sea; we have not anchored or touched at any port since our departure, and being now fairly becalmed in deep water off the west coast of Mitylene we cannot, near as they are, expect to make the Peak of Tenedos and the Troad till to-morrow or Monday. During the last six-and-thirty hours the light and wayward breeze has stood a short time at east; then veered again and again, sluggishly and most irregularly, to nearly every point between N.E. and N.W.; and now to crown its pranks has it cavalierly and completely slept and died away; "gone to the tomb of all the Capulets"; left us most ungenerously in the lurch; and this after blowing but faintly and lazily in fits and starts, both yesterday and on Thursday night, and from none save unacceptable quarters, either in mere wantoness and waggery, or purposely, knowing us to be Franks and Giaours, to impede for a few days, our approach to the Dardanelles and "City of the Sultan." The venerable "King of Storms" in permitting this heartless desertion of his subject zephyrs seems rather carelessly to have forgotten that they have not overburdened us with recent favours; that for instance, almost the whole of last week, commencing on the twenty-third of September was spent, through their opposing blasts and puffs and squalls, not as we desired in "running" through the "Arches," but

inch by inch, and very frequently half under water, in "beating" up to our present becalmed position, even on the morn of Michaelmas Day, when, I may here record, as a substitute for goose, *absente*, we sacrificed our very last fowl in honor of the Feast, and therewith at mess, contrary to expectation, comfortably indulged in unusual potations, and leisurely demolished an extra allowance of pork and pancakes. For, having at and for some time after daybreak very bad weather below the island of Scio, a strong contrary breeze with much swell, we wisely decided on getting quit of such continued pitching and rolling; and, therefore, by a little manœuvring managed, instead of standing seaward, to get well *within* the straits before dinner time. Here, to make the most of our holiday we took it somewhat easy throughout our zigzag course, and enjoyed ourselves the more, in that for the previous six or seven days we had been literally, as well as technically, working to windward against a stiff north-easter, and labouring hard too, as many a tar can testify, who then tended, watch and watch, our saturated tacks and sheets.

Between the 26th and the 28th ultimo, we were compelled to heave to for a few hours' shelter or to repair damages under the lee of Serpho of Delos and of Myconi, four of the Cyclades wrested from the Turks to form part of the present Greek Kingdom, but not by any means so important as the island of Syra to which they are all adjacent. Now, such annoying delays and losses as we have just experienced; such tantalizing and baffling light airs; and such contrary gales and drenchings, added to the harassing but necessary look-out and the constant care required when closely surrounded by countless rocky isles and islets, (the majority of them appearing from the sea not exactly as Poets sing, but, nearly as barren as the Mewstone at Plymouth,) and the being "bedevilled" moreover by cross and powerful currents as at the Stapodiæ near Myconi and Dragonisi, may well be said to have created on our part a claim upon Father Æolus for a fair wind, or at least "a slant," and his Olympic Majesty's illiberal infliction of the present calm is therefore the more intensely provoking. Having as we think reasonable foundation for this claim we are nettled that it remains so thoroughly disregarded by the aërial Powers, whose easy monarch cannot but have fallen into some predicament, or assuredly better luck would by this time attend us. Perhaps, he has been successfully *mesmerised* by the merry Momus, and yet remains entranced; and hence the cause that during the greater part of to-day not e'en a catspaw has played around us, hence the cause that all our whistling for a breeze in oceanic form and fashion produces not the desired effect. Zounds! what is the good of depriving us of wind, what is, what can be the use of a calm in this particular locality except to pirate-manned mysticoes and trigoneras? To us "honest men" burning to reach our destination, and aware that in these climes where

"Law secures not life,"

a cut-throat's glass, may, if not from shipboard, already have espied us from some convenient beach or cavern; knowing also ourselves that we are almost unarmed; to us, in truth, even a return of the abused gale, for an hour or so, would still be rather acceptable than otherwise, were

its only effect that of gaining us an offing. Sea-room is generally to be coveted. And here the cultivated undulating shore is unfortunately within four or five miles of us; yet blind to all its beauties

"Its hills and prospects fair,"

our anxious, only cry is for a breeze, at all events a breeze, come whence it may, and though it send us ahead but a single knot an hour.

And, in all conscience, a snail-pace rate of advance is not much to sigh for in a schooner, which like our own, can walk so "excellent well" with but a shadow of a chance. She is in truth a clipper that can show off the gifts of Æolus to the best advantage. Never ought he, therefore, to becalm her. Looking at her logs, which, (unlike those of certain "fruiters,") are not made up, one for sea use, and a second for the credulous eye of lubbers ashore, it appears among numerous other achievements and proofs of her sailing powers, that in February 1833, on her maiden voyage, she managed to arrive at Naples from the Eddystone, in the short period of thirteen days! Few craft but steamers can hope to excel this feat. Passing over numerous other crack passages, I can, myself, testify that in her present trip, with the exception of a terrific night-squall off Goza on the 17th ult., when a corposant twinkled for a time on our fore-truck, she has constantly encountered light winds from the eastward between Pantellaria and Cape Matapan, followed, as already mentioned, by a week's boisterous weather, quite as far up as Scio and Psara, off the entrance to the Gulf of Smyrna.

Yet, under these and other drawbacks she has at length reached Mitylene from Malta under a fortnight. Not that this is much to brag of; still, however, have we no right to complain; since, of the many vessels at first in company, none are now with us, none near us, none even on the horizon. We are monopolizing the waves of Sappho's isle, so far as "wooden walls" are concerned, with the exception of a few caiques, and a brig, a cutter, and a ketch, inshore, that we have here come up with, and which are now like ourselves altogether becalmed.

These vessels we saw ahead of us yesterday, on first clearing the straits of Scio, when and where, judging from appearances, we were within an ace of an adventure.

At 6h. 30m. A.M. we were astern, but to windward, and within musket shot of a rakish brig, steering the same course as ourselves, which had very much the cut of a pirate. We had but five persons on deck at the time, the mate (at the wheel) and myself aft; and three hands forward; the captain and the rest of crew being below and asleep, each probably from recent fag as sound as a top. The name of the stranger, with some difficulty, I made out to be the EOLO, the letters of which were raised, and *painted white* on her stern *on a white streak*, not a very good plan to render them legible and clear as in *merchantmen* required. She had four hands aft, the helmsman in the usual Greek dress, another in a somewhat similar costume, with a queer white turban, and the other two palikari in garbs indescribable. Lying also on the booms between the fore and main-masts, were nine mustachioed men in red Greek caps, white kilts or fustinellas, and red sashes.

As we neared the brig a crowd of fellows suddenly manned her

starboard side. I counted twenty-three heads above the bulwark, rather a large and suspicious complement for a brig between 150 and 200 tons. To increase our good opinion of them they next ran out a gun, an ugly "medium," from the starboard midship-port, when Thomas Savage one of our watch (and who during the night had by-the-bye distinguished himself as a dentist, to which Sam Gainey, if he ever read these pages would gratefully bear witness,) instantly sang out on seeing this specimen of *teeth* "By Jasus! this is the second time I've been captured in this very spot, the first time the divils stowl every thing but the shirt o' me, kilt me entirely—" "Eh! now, they haven't got you yet for the second time, Paddy," said one of us, "there's many a slip 'twixt the cup and the lip old boy!" And so it proved in the present instance, for, pirate or no pirate,* the breeze presently freshened and we crept past our supposed enemy, with a white ensign flaunting at

* It is certainly uncharitable to set down the Eolo as a decided pirate. That Mediterranean piracy, however, existed at least down to December, 1843, may be easily proved, and cases continually occurred between that date and the time of our falling in with the Eolo. It is known that on the 12th of December, 1843, H.M. steamer *Locust* returned to Gibraltar from an unsuccessful cruise off Malaga, whither she had been ordered to proceed in consequence of a piratical outrage. The Mediterranean consuls of the several Powers had just received information that, on the 2nd of December, 1843, a sharp black polacca brig—coppered, with an ordinary figure-head, very light, and having no appearance of ports, sailing fast—committed an act of piracy close to Malaga, where she first boarded a brig, and then a barque, laying alongside the latter, which she subsequently scuttled, till the following morning. What became of the barque's crew may be guessed, when thirty men, and to all appearance Greeks, were seen in the pirate. This piracy let us remember, was committed Dec. 2nd, 1843.

Now, in October or November 1843, a Greek schooner, called the Santa Trinità, captured a large country boat of 1,500 kilos burden, near Rhodes. The leaders of the desperadoes in this second instance were M. T. Spano, and the famous Yani Zanni. The latter had been an accomplice of one Paolo Muscovo, in the recent murder of Mano Moldavanachi; and he now increased his bad reputation by aiding Spano in the slaughter of no less than nine persons! This occurred in November 1843. If we turn to 1842, we find that, on the 19th of July, in that year, seven seamen were killed by pirates off Smyrna; and that, on the then previous 5th of May, a French brig, Le petit Matelot, was attacked, but unsuccessfully, at Scala Nuova near Ephesus.

About a dozen cases of Levantine piracy have been collected and printed in Mr. Knight's "Words for the Windbound," showing that a Dutch brig was taken near Scio in 1838, that several other prizes were made by the Corsairs about that period, and that as many as nineteen lives were lost among the victims of their indescribable barbarities. So much for the sons of *regenerated* Greece!

The Countess Grosvenor, too, in her "Narrative of a Yacht Voyage," in the Dolphin, says, that on the 23rd of June, 1841, Mr. Lander, the British Consul at the Dardanelles, warned her that two pirate vessels were cruising near the Troad and Mitylene; and in Mr. Knight's book, already referred to, it is shown that these very vessels attacked a Turkish caique, on the 16th of June, 1841. H.M.S. *Dido* sailed from Smyrna in quest of these fellows, and so did the Austrian man-of-war brig *Lipisa*, but they were never captured. And now lately in 1843, the pirates off Malaga escaped H.M.S. *Locust*, and, in all probability will yet appear again in some opposite point of the Mediterranean.

The *Morning Chronicle* of the 6th of February, 1844, had the following nar-

the peak, which he answered by hoisting a confoundedly dirty "rag," a horizontal tri-colour, white above green and red, in stripes of equal width. We contrived to keep ahead but not very much so, for at ten o'clock we had only dropped our friend by two miles, although we were fast closing the three other vessels to windward, which, we have since kept in view. In the afternoon of yesterday we were all as we are again to-day becalmed. The wind after yesterday's calm first took us from the westward, veered soon afterwards to the northward and then played off its whimsical pranks of chopping and changing half round the compass, blowing in rapid succession from all quarters save those several southerly points which alone could do us much service. These whirligig vagaries were this morning followed by a second unwelcome calm which still continues. *N'importe!* we are at least better off than our late companions, whom one by one, including an Ottoman frigate, we have out-sailed. One of the number, (careful of his spars and canvas) was seen bearing up for Deïrmenlik Adhaçi, the snug harbour of Milo or Windmill Island; and many of the others must be still thereabouts, breasting some furious billow, or dodging, crawling along, or drifting, according to the ever uncertain state of the weather off the southern and eastern coasts of the mountainous Morea, where "by the beard of the prophet", as our neighbours ejaculate, the winds among other wild exercises often seem to be throwing summer-

rative in the columns which it filled with Mediterranean news on the receipt of the Levant mail. Read this paragraph ye supporters of the Modern Greeks, and remember that these atrocities were committed in the Christian era 1843-4!!!

"The late Case of Piracy.—We lately announced a case of barbarous piracy and murder, committed by the schooner St. Trinità, on a cernic, on her return from Satalia to Simi, and the capture of the pirate at Samos, whence the actors were sent to Rhodes, and are now in prison. Only five, however, have been arrested, and by these, disclosures have been made which horrify and disgust. His Excellency Hassan Pasha has demanded instructions from Constantinople as to the course he is to pursue, for the prisoners, being Greeks, cannot be put to death, except with the concurrence of the Greek government, which, in that case, will disclaim its subjects, and they will be then considered as Turkish subjects, under the title of rayahs. We hope that the Greek government will throw no obstacle in the way by which justice shall be deprived of her right, for who, after such a confession as the following, will feel an iota of pity for such blood thirsty, callous scoundrels?

"*Nine cases of piracy,* in each of which the *murder* of the victims, and the scuttling of the vessels attacked, had, *before the last,* been committed—and in this last case the lives of two passengers were taken, one a young girl of 18 or 19 years of age, of surpassing beauty.

"She was transferred from the cernic to the pirate schooner, where she was kept three days, during which time she was assaulted by all the crew, and forced to abandon herself to their guilty passions; this done, she was ordered to prepare for death—death by decapitation—her hair was close cut, that nothing might impede the progress of the knife! when the wretched girl begged of her assassins to throw her into the sea, instead of decapitating her.

"Her request was complied with, and the hapless creature was launched from the vessel's side, where the death she demanded speedily put an end to her agonising sufferings."

saults! Be these vessels where they may, they are not within our present ken.

The whole view around, the four sail, and the few caiques inshore excepted, is broken only in its bright and broad expanse by "islands blue"; and shoals, not of dolphins, but of snorting, plashing, plunging porpoises. Roused from inaction by the boisterous antics of these swift and harmless monsters of the deep, who appear to revel heartily in the sunlit swell and sudden change from comparatively bleak to sultry weather, part of our Devonian crew have just dashed overboard to exercise their fins and flippers; thus recklessly evincing, where there may be considerable danger, a regular bull-dog contempt of Asiatic sharks and swordfish. In the present cruize, however, none of the former have been fallen in with since quitting Cape de Gatt,* in Grenada, on the Mediterranean coast of Spain, below Carthagena, a spot sufficiently famous for ferocious sharks and good fat turtle.

Touching the latter genus it here occurs to me, that when homeward bound on one occasion in a Yarmouth brig, from a port in Asia Minor, we had a long passage, notwithstanding the short intermediate distance, between the Spanish Cape in question, where we had been lucky in our fishing, and Gibraltar. While beating down to the Rock some of our recently captured "sea-tortoises," much to the cook's dissatisfaction and our own, began to sicken. On arriving at Gibraltar we immediately bored a hole in the after part of the upper shells of the invalids, then passed a log-line through, hove the marine-cuirassiers overboard, and suffered them during a two-days' sojourn to waddle about the bottom of the bay, as far round the ship as their sternfasts would permit. Hauling them on board again when getting under way for England, we found our flabby patients amazingly benefitted by the cold water cure resorted to. Not long afterwards the last of them adorned the cabin mess in the latitude of Vigo, after having thus sailed in "durance vile" from the far east to the far west of Hispania under the flag of

"La perfide Albion."

But here off Mitylene, the Midillu Adhaçi of the Turks, no turtle have to-day made their appearance. Should they but foolishly come to the surface, the heat of an October Ægean sun (so genial that we yet wear nor shoe nor stocking) must soon induce sleep, and that our boats would speedily be in chase the mere fact of our fresh provisions having as I have already said been exhausted with our last fowl on Michaelmas Day, is a sufficient moving cause and reason. There is much sport in catching turtle, as well as gastronomic pleasure in devouring them. The crab-tailed victims rise and float on the surface, and then fall asleep; the boat is cautiously sculled close up to them, silence is the order of the day, care is taken to approach by the rear, so that if

* And in December 1843 for pirates! Pirates cruising in a *brig!* The Santa Trinita, which made nine or ten captures in 1843-4 in the Levant was a *schooner*. Yanni Zanni, one the schooner's crew, is an old hand at plundering, and has already experienced the *leniency* of *Greek* tribunals.—See the *Times* of Dec. 7, 1843.

But a few more such *acquittals* and we must *changer tout cela*.

they open their heavy eyelids nothing but sea may meet their drowsy glance. They are generally too lazy to turn their heads, although as quick as lightning in diving and escaping if sufficiently disturbed; but "slow and sure" is the rule to be acted on, the boat at the "nick of time" advances, two anxious bow-men lean over her side, a sudden grab is made by one or both at the turtle's fins, he struggles, attempts to bite, but it won't do! "Shelly" your "paw" is in the fist of a ruthless tar, and soon shall the cook's coppers receive you!

Flags are now shown from the ship, indicating "pull to starboard," or "pull to port," "go farther ahead," or "look astern," each signal is obeyed, and in a very short time though some few turtle may succeed in baffling their pursuers, many others find themselves floundering in the bottom of the boats. Flushed with success the happy mariners soon regain their vessel, looking forward to an aldermanic meal whereby the monotony of beef and pork, and then pork and beef, is to be broken through. Another dish is "for the nonce" to smoke upon the board.

Salt junk may be good enough in its way, and sometimes all sufficient, yet *toujours perdrix* cannot content even a seaman's appetite, a fact which on reference to a celebrated man-of-war protest still to be seen in one of the Consulates at Smyrna will at once appear to be most incontestable. Here, however, must I suddenly abandon Diary and "grey goose-quill," yet just to expend the ink therein let me set down that, tho' owing to the continuing calm the log has not been hove, no other rule has been broken; just this moment has the bell been struck, the chain pumps clanged and the well sounded, the watch called, most of the crew sent to dinner, and here, here for ourselves smokes a roasted, tempting joint, that e'en a king might cut at! Really and truly, a man must go to sea to feel the true meaning of appetite. Had any fanatic follower of the Prophet but shared our six weeks' passage, he might easily by this time have gained stomach enough to forget all scruples as to swine's-flesh, and have learned to enjoy this day's pork, *vice* the most savoury pillaff, as well as to prefer bottled stout and grog, to his own country's boasted sherbett. As for myself, I like not these carnal prohibitions. The sun, an hour or two since, was as usual, duly reported "over the fore-yard," and as duly toasted as if we had been Parsees at worship; and now again hear we the welcome sound which assembles our merry mess to strengthen the sinking inward man in a more substantial manner. Punctuality in *all* things is praiseworthy, and here, therefore, I quit my scribbling for a seat at the cabin table. May our next dinner be eaten in sight of the Dardanelles! We are all heartily sick of gazing at this Mitylene, verdant as it is. Stamboul is our cynosure!—The Fairy City of the Bosphorus!

Monday, 3rd October, 1836.—Saturday and Saturday night, and Sunday and Sunday night, have each and all slowly passed away, and with better fortune than at one time anticipated, we have gradually jogged on, and are at last safely at anchor in mid-channel, between the island of Tenedos and Beshika Bay, an indent *not within* the straits, but on the seaward coast of Troy. We shall weigh for the Dardanelles, now but two leagues distant, to-morrow at daylight.

(To be continued.)

Stray Yarns Gathered Here and There.

Quaint though significant titles are sometimes chosen for articles which are unconnected, or such as are classed under the head "Miscellaniæ"; "A thing of shreds and patches" belongs to the class of periodicals suited to the *general* reader, and especially to the shore-man; and "Odds and Ends" that often end very oddly, are the ingredients in a sort of literary hasty pudding, suited to the taste of the inveterate snuff-taker. The "Shakings" of the *Nautical*—the blue periodical, for the *particular* reader, though understood by him, must have puzzled him who hails for terra-firma; and might give rise to the same mistake which happened to an honest yeoman, who in the hope of improving the breed of his kine, purchased Miss Edgeworth's Essay on *Irish Bulls,* under the impression that it was a treatise on the genus Bos! In the mind of the shore-folk "Shakings" would at once be associated with fits of the ague and chinchona. Excuse the natural politeness of a well bred man, must have been uppermost when the prolific pen of a gallant sea Captain struck upon the variegated compound "Patchwork," as a title to his gleanings, for I conclude it was meant as a compliment to his fair readers, and to entice them to look into the fine sheets under such a motly covering. Our "stray yarns," however, have no such pretensions—they savour of the tar brush, and are mere bits gathered and arranged.

Ships and Ship Timbers.

"As a work of art—a ship has at all times, and in nearly all countries called forth expressions of wonder."—*A Day at a Shipyard.*

Constant familiarity with an object robs it not only of much of its power to interest, but also lessens the sense of its intrinsic value, whether it be a natural or an artificial production. Still, however, we do not altogether lose the impression of its importance when its uses are conducive to our comfort, our pleasure, or our interest; but such is the inconsistency of human nature; that too often we become indifferent, when once in possession, about every thing else relating to it.

The construction of a ship of any class, whether for the purpose of war, or for commerce, has long been admitted and esteemed, as an art of very great merit; yet, strange to say, it would appear that little science has ever, in this country at least, been exercised by our builders in the production of their models. Indeed it seems to have been, hitherto, a disputed point whether science could aid, what has been termed the "rule of thumb" in the composition of an improved model, which shall insure the certainty of swift sailing, stiffness, easiness of motion, and other good and necessary qualities of a ship.

Whatever merit may belong to the models of the present Surveyor's ships, it appears they are, by no means perfect; they possess the bad quality of plunging deeply, which occasions wetness and straining; and it has been allowed that their property of quick sailing is not preserved

under all circumstances. Other vessels, differently constructed, are reported to be equal to them, and even superior in swiftness, when exposed to heavy seas. Their principal good quality appears to be stiffness; but, upon the whole, they are admitted to be very fine men-of-war.

I do not know whether Professor Inman's model was formed entirely upon mathematical calculations, but be that as it may, his ship's qualities have not been much extolled, nor, I believe, much contemned. Admiral Haye's, and the honourable Admiral Elliott's vessels are considered as possessing some good qualities, and are said to be fine ships of their class. A new light, however, has shot up in the north, which is to outshine all competitors. Undoubtedly swift sailing is one of the most important qualities in any vessel; equally so to the Merchant as to the state; but, we need not say that, there are other essential points necessary to constitute an efficient vessel; a perfect one in all respects is still a desideratum.

At the late meeting of the British Association Mr. Russell, to show how much influence *form* alone, without any other element or dimension, affects the question of resistance, adduced the following as one of the most important among other experiments:—

Four vessels were taken, having all the same length, the same breadth, the same depth, the same area, and form of midship section, and all loaded to the same weight, displacement and draft of water. The only difference being in the character of the water lines; No. 1 being of the new form indicated by these experiments as that of least resistance (the wave line); No. 3 the old form, very nearly the reverse of the first; No. 2 intermediate between them; No. 4 intermediate between Nos. 1 and 2.

The following table shows the result of the comparative trial.

Speed in miles per hour.	Resistance in Pounds.			
	No. 1,	No. 2,	No. 3,	No. 4,
3 miles.	10	12	12	11·3
4 "	18	22	23	21
5 "	28	38	42	35
6 "	39	61	72	56
7 "	52	96	129	94

These differences showed how much might be gained, every thing else being equal, by the adoption simply of judicious form in the construction of the water-lines of a ship. The vessel No. 1 was constructed on the wave line. The methods and rules were explained by Mr. Russell, but are not yet published. It is stated, however, that "those of the smallest scale were drawn by a weight arranged in such a manner as to supply a uniform force through any given distance—and in the largest scale the experiments were made on the sea by means of powerful towing vessels." The resistance was accurately

measured by dynamometric apparatus of great accuracy, through which the moving force was communicated to the vessel; the velocity being determined, in certain cases, by a peculiar apparatus designed for this purpose, and in other cases by instruments for measuring and marking time with accuracy.

I leave the reader to entertain what faith he pleases in these experiments. Independent means of ascertaining the amount of speed or velocity in each individual vessel, sailing on the ocean in consort would appear to be a more satisfactory mode.

I have now to speak of the timber with which these wonderful fabrics are constructed. How few among the thousands who admire the stately grandeur, symmetry, the graceful attitude, if we may so express ourselves and the beauty of a line-of-battle ship, ever think of enquiring into the amount of wood alone required to form and build up one of these mighty floating habitations? One of those "electrical instruments" through which Britain speaks with a commanding voice of thunder to surrounding nations, upholds her independence, awes the refractory, and rules the seas!

Five hundred ships and other vessels are annually lost, in some way or other, and a thousand seamen and sailors lose their lives in the same period of time! It is obvious that the deficiency occasioned by the latter circumstance may be supplied from the native population in a very much shorter time than the former would be from the stock of home-grown trees. In twenty or twenty-four years from his birth, a man may be so well instructed as to be competent to fill the station of able seaman; but an oak tree requires an *age* to pass before it arrives at maturity. At the time of the Roman invasion, Britain was celebrated for her forests of Oak; in the lapse of the centuries that have since passed, the trees have been consumed, and comparatively speaking, at the present day, there is little of large timber of the genus *Quercus*, available; by the aid of Jeffery's Marine Glue, the smaller sized timber now, it is to be hoped, may be used in the construction of large vessels. From the deficiency of home-grown timber of all sorts, we find immense stores imported from Norway, Canada, New Brunswick, New Zealand, Africa, and other parts of the world; the *Pinus* or fir tribe predominating. From Canada alone hundreds of ships are annually freighted with this commodity alone, which serves to shew what a vast consumption there is of this material of commerce in England.

In the external view which we take of a ship of the line—say a 74, we should, perhaps, be deceived in any estimate we feel inclined to make of the amount of timber used in her construction; she appears so trim and compact, the whole of her internal frame being hid from view, that even with a tolerably clear idea of her mechanical fittings, we should, it is probable, fall short in our calculation of the number of trees required to complete her entire hull. The computation is that a ship of this class consumes 3000 loads of timber, each load containing 50 cubit feet, and a ton, 40 feet. Two thousand large well grown trees, about two tons each, are required to meet this amount! Allowing 33 feet (30 feet being the usual planting distance) between each

tree, then, a statute acre will contain 40 trees; and a 74-gun ship would consume the timber of 50 acres.

The man, therefore, who plants 500 acres of land with 20,000 oak trees, which in ninety or a hundred years will be available in the construction of ten sail of the line, is a true patriot, whilst, by such an act, his posterity will reap an ample fortune.

How indebted is Britain to the Oak, that noble ornament of her forests and her parks, which supplies the material for her floating caravans of commerce, and for the cars of Bellona. What indeed does not the little island owe to her "Hearts of Oak?" Her fame, her riches, and her stability.

How strange that the tiny, apparently insignificant acorn, should hold within its beautiful and much admired form, the gum that through the fullness of time shall produce a means whereby the destinies of nations are to be governed, and the world alternately deluged in the blood of battle, or calmed into the repose of a peaceful traffic! How wonderful too the capacity and the spirit of man, making all things subservient to his ambition or to his interests! Now displaying the ferocity of the tiger, and now the mildness of the lamb! How little do we reflect when gazing upon a piece of oak wood, that such mighty effects are consummated throughout the habitable world by the instrumentality of such a vegetable production.

It is surprising that the acorn, as an emblem (of which nothing can be more elegant in form,) should not have found a place in the Royal Arms, or in our ensigns. What more appropriate devise and distinction could be given in the flags of the British fleet than a wreath of oak leaves and acorns encircling the Crown. Placed in the field of the red, or the blue ensign, it would readily distinguish either from that worn by the vessels of the Mercantile marine.

The Anchor and Anchor weighing.

The ingenuity and the simplicity displayed in the form of the anchor as adapted to its use is most admirable; and on that account it has always obtained general praise, and this justly, for, unquestionably, when a machine combines extreme simplicity with efficiency in its construction, the mind is at once disposed to award the full measure of its admiration, though it should not be perfect. Some have considered the form faulty on account of the liability of the upper arm (when the anchor is down) to foul the cable. This effect, however, seldom happens with careful and expert seamen. At all events there are few instruments of power, more suited to their purpose than the anchor is to that for which it is designed. Nothing, indeed, can exceed the simplicity of the lever and the wedge, but these are media by which the muscular power of the human frame is applied, cannot act of themselves in degree. It is otherwise with the anchor; the simple act of dropping it from the ship's bows is sufficient to ensure the performance of its part without further aid from the hand.

The antiquity of the anchor is unquestionable,—coeval, perhaps, with the first rude attempts to breast the billows in hollowed wooden struc-

tures; antecedent to which period, no doubt, pieces of rock were used for the purpose of securing the canoe, the class of vessel which appears to have preceded the decked boat; and among the maritime nations of Europe it retains the same name with very slight variation.

For centuries the anchor has remained without alteration or improvement, and, indeed, in the modern attempts to improve it, the general shape is adhered to. The greatest innovations have been effected by Mr. Hawkins in 1821, and by Porter and Co. in 1840. The first is extremely novel, and the principle upon which the alteration has been made seems to be excellent in theory, but, I do not know if the plan has proved equally so in practice. Mr. Hawkins appears to have aimed at obtaining an increase of holding power, and to prevent by a new disposition of the arms, the possibility of the anchor becoming fouled by the cable: as far as a theoretical view can settle the question, the Patentee appears to have succeeded in his object; but whether in the practical application of his means, it will be found that the modification will not reduce the general strength of the instrument (the arms not being welded to the shank) I, of course cannot determine; but it appears to me that the support of the strain upon the palms and arms, must rest upon the bar, which is called the stock.

Double power is gained in the resistance offered to the strain, which is of vast advantage, because *one* anchor becomes equal to *two* formed in the old fashion. Both arms enter the ground when the anchor reaches the bottom. To effect this, the shank is not joined to the arms, but the crown is bifurcated and pierced, and the arms being of one entire piece it passes through these holes, between which a short iron bar, called the *stock*, is introduced into a perforation in the central part of the arms which projects forward, and is forelocked; and thus the arms when imbedded are effectually prevented from turning, and are consequently kept in an inclined vertical position. The shank is entirely plain, that is,—it has no stock near the ring; and as both arms are imbedded the anchor cannot be fouled.

Porter and Co's. anchor in not having the arms welded to the stock is, in that feature, like Hawkins', but otherwise the principle upon which the alteration from the common anchor rests, is very different from the latter. Still, the crown is the place of innovation; it is also forked, and the arms traverse on a bolt which passes through the two ends of the bifurcated shank at the crown. The effect intended to be produced by this moveable disposition of the arms is, that when the anchor is imbedded, the upper arm falls down, so that the pea of the fluke rests upon the shank, by which the anchor is prevented from being fouled by the cable. Other advantages are named by the patentees.

Lieut. Rodger's anchor, which is spoken very highly of, appears to differ from the common one in having the palms smaller, and being well wrought, and formed of the best metal.

The great fault found with the common anchor is, its liability to break where the arms join the crown. The objection to the upper arm being a snare to the cable, in a tide's way, seems rather to be an excuse for the want of due vigilance in those whose duty it is to "keep their eyes about them," when a ship is at single anchor; and, I may remark, by the way, that the art of managing a vessel at anchor where there is

tide or current, is a point in seamanship very much neglected; and, hence the cry about the faulty construction of the common anchor. The new inventions, therefore, become a premium for inactivity of mind

Of Morgan and Little's anchor an account appeared in the *Nautical Magazine* for 1836. It appears that the several parts are formed of distinct pieces of iron, which can be transported in a boat to a ship, and there put together. It is stated that the arms are of one piece, and this passes through a perforation in the crown; the stock is also separate, and secured to the shank when required.

We may now turn to anchor weighing. There is some variation in the mode of expressing this act, which is remarkable in a profession where unanimity in the application of terms is observed with peculiar care. The variations are—1st "weighed;" 2nd "wayed;" 3rd "got under way;" 4th "got under weigh."

The first appears to be a correct mode of expression, implying simply that the anchor has been lifted; according to the authority of Knolles, to weigh, is "to raise."

The second the schoolman or grammarian would, perhaps, consider as an incorrect mode of speech without meaning, as the final syllable seems inapplicable to enlarge the sense of the word as derived from the adverb "away." I am aware of an attempt having been made to uphold it, but the argument was rather one of tortuous ingenuity than of conclusive reasoning.

The third mode of expression may be admitted as correct, as according to the authority of Dryden, "way," implies "a regular progression;" thus, by the act of withdrawing the anchor, the ship is placed in a state of progression, that is, under the influence of the sails, which is a propelling motion.

The fourth appears to be incorrect, inasmuch as the meaning intended to be conveyed by the use of the expression is forced, and unsuited to it. The import of nautical technicals should be distinct, of common acceptation, and free from ambiguity; for custom can never sanction in those who study correctness in the articulation of sounds which are intended to convey respectively or collectively a certain meaning, the use of those which are inapplicable to the subject entertained, and and which can only serve to torture the sense, or jar the ear.

There are several modes of correctly expressing the same thing. Thus, we should, perhaps, with equal, if not more, propriety, write or say, "Got the ship under sail." That is, the ship is brought into that state in which the hull becomes in subjection to the action of the sails, which action is regulated by the helm. And I think the meaning of the sentence "Got under way," would be better expressed as being more precise, if we wrote, "Got the ship away." That is, away from her berth or anchoring ground. It is true, something is wanting to make up the sense, but that something is readily understood without lengthening the sentence by the addition of "from her berth;" brevity being admitted as essential in the entries made in a ship's log. The boatswain, albeit not much of a scholar, nevertheless, grammatically expresses himself when he exclaims that "the anchor's away."

In incidentally touching upon these several modes of expression, I by no means desire to be considered as setting myself up as an authority,

and, therefore, leave the reader to judge for himself. My design is to call the attention of the seaman to the propriety of employing a uniform mode of speech, with reference to the evolution of a ship, as *Commuia proprie dicere,* is surely very desirable.

I have met with some rough-knots* who were fond of talking fine, and, one in particular, who thinking the plain simple expression "smart," too vulgar to be addressed to the top-sail-yard-men of a cruising frigate, always urged them to exercise their energies with "alacrity." A word which puzzled the Jacks exceedingly, and which was most painfully defined by an unfortunate seaman falling from the yard at this officer's feet, and being killed on the spot. Another of these methodical speakers, who prided himself on being "Yorkshire," was in the habit when there was occasion to haul the jib down, of calling out in a clear sonorous voice to "man the jib down-haul*er*." The point was argued among the officers whether the expression was correct or not; all but himself agreed that it was a "barbarism," which not even the acuteness of "Yorkshire" could legitimise; but he still adhered to his own opinion that it applied to the rope and not to the power employed.

The Velocity of Ships, Points of Sailing, Carrying Sail, &c.

It has been said that a *beam* wind will in general give a vessel the greatest velocity, as she does not recede from its source. The reason assigned appears vague and unsatisfactory, and is indeed negatived by the fact that a ship on a wind (which point of sailing does not cause her to recede from the source of the wind,) often makes but little head way; but being put before it, with the same spread of canvas, immediately increases her speed, and in following that course she directly runs from the source of the wind.

Every vessel has a particular point of sailing upon which her velocity increases; this appears principally to depend upon the form of her model, which, although it may not have been designed upon any scientific arrangement, meets least resistance from the fluid through which it passes, when the hull is placed in a certain position relatively to the wind, and the direction of the waves. The expectation that differently modelled vessels will sail equally swift upon any given point, or that any individual ship will do so upon all points, would seem to be a fallacy, if the former premise be correct.

The possibilty of forming a model that shall combine every desirable good quality appears very doubtful; but a model may attain great excellence. Seamen know that the fast sailing property of a ship depends often upon her trim, particularly of the dead-weight which she carries. The stowage of the ballast, and of the supplies; or, in merchant vessels, of the cargo, is of material consequence in preserving that quality; for, experience shows that the speed of a ship may be lessened by an alteration in her trim, and *vice versa,* independant of her model, even an alteration in the rake of the masts will occasion the same effects; and an easy ship may become an uneasy one by a different disposition of

* Query—Rough-naute.

the iron ballast. But although experience has determined such to be true, yet it would seem that no general rule can be applied, as the judgment in any remedial means must be principally guided by the character of the hull, the rig, and the size of the sails. In some ships all efforts are often vainly exerted to improve the rate of sailing, but upon one particular point. Some will fore-reach upon others on a wind, and are weatherly; which quality of swiftness they lose when off the wind, or going large. The strength of the wind often, too, creates an astonishing difference in the rate of sailing of two vessels, one gaining the superiority in light winds, and losing it when the breeze freshens, without the slightest alteration in trim, or point of sailing; but, although there must be a cause for every effect, we have hitherto been at a loss to account satisfactorily for these differences. One circumstance I have often observed, but I cannot pronounce it to be general; it is, that *long* ships sail fast, and keep their way.

The cause we should assign for a "beam wind" being the best to produce velocity in a ship is, that, the position of the sails with reference to the power of the wind, allows every inch of canvas to become exposed to the pressure, and therefore the propulsion, must abstractedly considered, be in excess over that which is given on any other point of sailing; all the angular sails act, and there is less "bellying" of the square sails; and according to the stability, or stiffness of the vessel, so will the advantage be regulated. It is obvious too, that the full pressure of the wind is exerted upon the whole of the sails, which is not the case on a wind, for then the direction of a force is oblique, and the lee portion of the sails becomes almost useless; and with the wind right aft, though a greater number of square yards of canvas should be spread, the sails, on the masts, being in a line ahead, a portion of the effective force is lost, or but partially supplied. Some seamen imagine that the more sail spread the more speed is gained, but assuredly the expectation will not always be realized. It is difficult to combat or subdue long entertained opinions and prejudices, for to convince a man against his will (like Goldsmith's Hero) he'll be of the same opinion still.

In a prize schooner we tried the effect that would arise, first, by setting, (and booming out) the fore and aft sails, and the square sails, when sailing before the wind, and then taking in the former; the result was as we had anticipated, the vessels speed, if any alteration, was increased, and she was steered with much more ease. A ship is often so oppressed by the quantity of canvas spread, when on a wind, as very much to impede her velocity. "To crack on her" is a favourite expression, and the impression on the mind on such occasions is a very erroneous one, as we proved to the captain of a sloop of war, when in chase of an American merchant brig: the breeze according to nautical phrase was a "spanking one" close hauled, carried top-gallant-sails and main-royal; the lee gunwhale was immersed in the water, which was comparatively smooth; the wind steady. Upon my representatation, as officer of the watch, the royals, and fore, and mizen-top-gallant sails, were taken in, first heaving the log and noting the rate of sailing; when these sails were furled, the log was again hove, she went half a knot faster; the Captain was incredulous and hove the log himself, and

was convinced. It is not improbable that had the top-gallant-sail been taken in, and the first reef of the top-sails, the ship, with such a fresh breeze would have increased her speed.

In chase of an enemy's war vessel, some degree of moral courage would have been necessary to have followed such a step; and I think that the practice, in all ships, should be occasionally performed under the condition of a fresh wind; and if conviction should follow, spars would be often saved, and perhaps prizes caught with more ease. At all events with less hazard of the top-masts being carried away, which where the sailing happens to be pretty equal, generally ensures the escape of the enemy. If the remark that "a ship is made to sail upon an even keel" be just, then every streak she is heeled over from the press of sail she carries, should necessarily reduce her velocity through the water. Crank ships, however, do not always sail badly; but it is probable, if they could be made stiff, they would sail better. On the above principle we should expect to find ships which stand well up under canvas, and smart wind, to be swift sailers. In some instances we have observed this to be so, but as so much depends upon other points in the construction of the hull, the effect will not probably be found general.

That a wedge-shaped bottom assists the quick sailing of a vessel may be true, but one of the swiftest sailers I ever knew was a flat-floored corvette, of good beam, and great length; she was as stiff as a rock. With respect to lateral resistance, a ship with the angular or wedge-shaped bottom, should be weatherly. The wedge-bow, too, from its sharpness, impresses upon the mind the idea of swiftness; but other things are to be considered, though abstractedly this may be true; the wedge-bow is not necessarily required, for bluff-bowed ships have been known to be very fast sailers; to insure easiness of motion longitudinally the demi-hemispherical bow seems to be necessary. But unquestionably it is not the form of one part alone that will supply the required excellencies of a ship, the ensuring of which requires a mathematical head, and a mechanical hand to a certain extent. Experience, however, must at last be the test.

The Admiralty Charts.

Sir.—On the estimate for defraying the expenses of the Scientific Departments of the Navy being moved, in Parliament, Mr. A. Chapman is stated to have said that he "Wished on the part of the Merchant Service to express their gratitude to the Admiralty, for the publication of the Admiralty Charts at a small price. He felt it his duty to state the immense service that it conferred on the Merchant Service."

While I am ready to join Mr. Chapman, in his acknowledgment of the great advantage, which the Merchant Service, must derive from the very low price at which the Admiralty Surveys are sold to the public, I think, Sir, that it was no less his duty, to have acknowledged the

advantages also derived by the Merchant Service, in the publication of the Sailing Directions accompanying those Surveys through the medium of the *Nautical Magazine*, more especially, as it is an advantage in which all participate, and which its low price, Mr. Editor, places within the reach of all. I think, Sir, that a similar acknowledgment of the good effected by their Lordships, in permitting the *Nautical Magazine* to publish such valuable information, immediately it is received, instead of delaying it for months, and perhaps years, as well as the Surveys themselves, was no less due than that which Mr. Chapman did make.

I trust, Sir, seamen do not fail in all cases to derive that benefit which is intended for them. But, there are other charts besides those of the Admiralty, and comparing the beautiful Survey by Capt. Vidal of the Gold Coast with a chart of Norie's lately, I was surprised to find the following differences which I request you will publish for their information.

Places differ from Capt. Vidal's Survey published by the Admiralty.

	Lat.	Lon.		Lat.	Lon.
C. Mesurado . .	0′	3′	C. Coast Castle . .	3′	4′
Grand Bassa . .	4	3	Barracoe . . .	5	0
C. Lahou . .	0	25	Accra	0	3
Picaniny Bassa . .	0	9	Ningo . . .	0	10
Assinee River . .	0	12	C. St. Paul . . .	5	0
C. Three Points . .	0	2			

In addition to the foregoing differences there are Rocks eastward of Grand Sestros omitted; Coleys Rock, 7 miles from land in Capt. Vidal's chart, while in Norie's it is 14; Cape Three Points Shoal further off than placed by Capt. Vidal; and a Bank off Ningo, inserted by Capt. Vidal I cannot find in Norie's chart.

Seamen will, I trust, know how to appreciate these differences, and the service conferred upon them, by your pointing them out; which service will, I trust, also not be forgotten by Mr. Chapman, when next he is acknowledging the great advantages of the low-priced Admiralty Charts.

MERCATOR.

The North-East Coast of Norfolk.

[As the Chart numbered Sheet IV. of the East Coast of England series, has just been published, it may be of service if we place on record the following letter which accompanied the original drawing to the Hydrographic Office.]

H.M.S. Blazer, Holkham Bay, Aug. 1st, 1843.

SIR.—I have the honor to forward herewith two charts of Lynn Deeps, completed and corrected up to July 1843: one on the scale of an inch to a mile, being the survey of Captain Hewett in 1828, the other a reduction of the same to half the scale, shewing the northern coast of Norfolk, from Cromer to Trusthorpe in Lincolnshire. On this latter, which forms No. IV. of the east coast of England series, the Dudgeon light-vessel and Race Bank have for the first time been correctly placed, the whole of the outlying shoals have been re-examined,

and about 400 square miles of additional soundings have been inserted, by Lieut. Cudlip and Mr. E. K. Calver, Master, assistant-surveyors of this ship.

As the correct position of the Dudgeon light-vessel is a point of some importance, I may mention that it has been fixed; 1st. By a triangulation carried off from the shore depending upon Cromer, Blakeney, Holkham, and Hunstanton; and 2ndly. By intersections, with a theodolite on a clear evening, from the Ordnance Stations at Docking church and Cromer light-house; that is, from the extremities of a base twenty miles in length; both these methods give within one cable's length of the same spot; and working from the points as laid down in the Admiralty chart, we cannot be much in error in assuming the true position of the Dudgeon light-vessel to be 53° 14′ 58″ N., 0° 56′ 18″ E.

This makes the distance from Cromer twenty-four miles, (usually reckoned at twenty-seven miles,) and seventeen miles and three-quarters N. 33° E. magnetic, from Wells church, which is the nearest point of land. On a very clear day the sister churches of Addlethorpe and Ingoldmells on the coast of Lincolnshire, and Docking, Holkham, Blakeney, and Cromer, in Norfolk, are distinctly visible from the deck of the vessel; but in case of breaking adrift, (which has occurred only once within the last twenty years,) the light-vessel is replaced by a bearing and distance from her watch buoy, which lies E.N.E. ½ N. one mile, near the shoalest spot on the Dudgeon bank.

In the present instance, as in all the work which it has fallen to our lot to examine wherever the late lamented Captain Hewett has been, all is perfectly correct, thus the Sherringham, Burnham Flat, Docking, Inner and Outer Dowsing shoals and buoys are all correctly placed; one singular oversight, however, occurs in the Race Bank, which, although rightly delineated we found to be nearly two miles north of its true position.

The shoal at the north eastern angle of the chart is connected with the shallow spot on the Outer Dowsing by a ridge of 8, 9, and 10 fathoms, thus, although we have not ventured to name it, I consider you will be fully justified in calling this the south end of the Outer Dowsing, and it will be a useful caution to mariners to be on the look out for that dangerous shoal.

The whole of the blank space in the chart has been thoroughly sounded over, but not any special feature has shown itself with the exception of three detached ridges of 3½, 4, 4½ fathoms, seven miles north-west of the Dudgeon light-vessel, which, it is to be feared, may have proved fatal in blowing weather to many a deeply laden collier, as they lie in the fair track of vessels. Looking at these ridges and others, with only 3 fathoms on them, lying about three miles to the northward of the light-vessel, I am of opinion that the north country trade would be generally more secure if they made a practice of passing to the eastward of the Dudgeon shoal.

Our soundings in the north-western part of the chart have shown that the deep water of the Silver Pits and Lynn Well are not connected by a deep channel, as there was some reason to suppose.

In Lynn Deeps many changes have occurred since 1828, the date of Capt. Hewett's examination, the most material is the channel up to the town of Lynn, which has moved much farther to the westward, or in the same direction in which it has been moving for the last half century, and it now has a fair depth of water throughout, is well buoyed, and in the harbour a few floating berths may be found for ships drawing 12 feet at low water spring tides.

The channel up to Wisbeach also has been materially improved, by a straight and deep cut, which enables loaded vessels to reach that town with ease, compared with the former intricate navigation.

At Sutton St. Matthews, a new town has sprung up, and a simple, yet beautiful, church, built and endowed by the Trustees of Guy's Hospital Estates, has just been completed. Fifteen hundred acres of marsh land near Terrington, embanked at £12 have sold at £75 per acre, and now afford excellent pasture: and some thousand more acres are in process of embankment. There is still room, however, for a bold and skilful engineer, and 50,000 acres more of useless

marsh land and sand banks, dry at low water, might be embanked with advantage to the owners, and great benefit to navigation.

The channel to Boston has been partially straitened, and several new buoys have been placed, as also in that leading to Wainfleet. I would venture to recommend in these channels, that Wisbeach bar buoy should be moved one mile lower down to the end of the shoal, and should be coloured red, instead of black, as are all the other buoys to be left on the starboard hand in Wisbeach Channel, and that the reflector of Hunstanton light, which faces S.W.b.W., should be coloured dark red to enable vessels running towards Lynn Roads by night to judge when they are up with the Roaring Middle, a dry and dangerous bank.

As a specimen of the errors in all the existing charts, and the most recent North Sea directories, I may mention that the bearing and distance between the Docking and Race's north buoy is stated at N.E.b.E. six miles, it is really E.b. N., two miles and a quarter.

The ordnance positions of Docking, Hunstanton light-house, and Hogsthorpe, (for which, as well as for many other civilities connected with the North Sea survey, I am indebted to Lieut. Yollond of the Royal Engineers, of the Ordnance Map Office, at Southampton,) is about 15″ farther south, and Cromer light-house, 20″ farther east than in the Admiralty charts; but in all our work we have kept to the points as there given, nor, as far as navigation is concerned, is it material to change them.

On Sheet IV. of the East Coast of England series, we have given views of the North Coast of Norfolk from Cromer, nearly to Blakeney, besides detached views drawn to the same scale, of all the conspicuous objects seen from the sea, as Cromer and Hunstanton light-houses, and Holkham and Blakeney churches, and I cannot deny myself the pleasure of requesting your particular attention to the fidelity and beauty of these drawings executed by Mr. E. C. Davison, Clerk in Charge of this ship.

I am, &c.,

To Capt. Beaufort, Hydrographer. J. Washington, *Captain.*

Harbours and Lights on Lake Erie.

Cut at Port Rowan.—A strong and well appointed floating light-vessel has been built, to be stationed at the Cut near Port Rowan, which, since its being opened through the neck of land there in the storms of 1834, has been used by steam and other craft coasting on the Canadian shore of Lake Erie, instead of making the great circuit of Long Point.

The moorings for this vessel have been sent up, and the light will be exhibited very shortly.

At the extremity of Long Point, near the site where the old light-house had stood, a new one has been erected. The tower and keeper's house are completed, the lantern is being secured in its berth, and the old lamps are undergoing a thorough repair, but they are of a very inferior description, and it is proposed shortly to substitute better lamps in their place.

Port Burwell.—The charter of this harbour has been surrendered to the Government.

The boats, pile engine, dredge, and other machinery at Port Stanley, will shortly be transported to this place, and the works of the alteration and improvement of the harbour, as well as that of the road leading to it, will be proceeded with as soon as possible.

Port Dover Harbour.—This harbour has also been taken into the hands of Government. A moderate sum is about being expended on it to render it more effective, by repairing the piers and extending them into deep water, and

by removing the deposit in the channel. The timber and stone are delivered, and the works will immediately be put in progress.

As this harbour will form a terminus of the new road to Hamilton, a considerable increase of trade there must take place.

Port Maitland and Port Colborne Harbours.—Forming the two entrances of the Welland Canal into Lake Erie are being proceeded with; but the expenditure thereon is embraced in the appropriation for the Welland Canal.

It is proposed generally to place a light upon the head of one pier at each provincial harbour; these lights to be of uniform character, to stand about 24 feet high, to show about nine miles, and to appear with a green belt across them; by it they will always be easily distinguished from fishing or shore lights, with which the pier lights heretofore have been frequently confounded.

Point Aux Pins Rondeau Light—1st class, height above water 60 feet, number of burners 12, fixed, stone; about to be erected on the extremity of Point Aux Pins; visible at 13½ miles distant.

Rondeau Pier Light—2nd class, height above water 24 feet, 3 burners, fixed, wood; to stand at head of East pier; visible at 10 miles distant.

Port Stanley Pier light—2nd class, height above water 24 feet, 3 burners, fixed, wood; in progress. To stand at head of pier; visible at 9 miles distant.

Port Rowan Floating Light—2nd class, height above water 20 feet, 3 burners, floating, vessel; built in 1843; now being moored, visible at 9½ miles distant.

Long Point Light—1st class, height above water 60 feet, 16 burners, fixed, wood; built in 1843; just completed; visible at 13½ miles distant.

Point Dover Pier Light—2nd class, height above water 24 feet, 3 burners, fixed, wood; to stand at head of pier; visible at 10 miles distant.

Port Maitland Pier Light—2nd class, height above water 24 feet, 3 burners, fixed, wood; to stand at head of pier; visible at 10 miles distant.

Port Colborne Pier Light—2nd class, height above water 24 feet, 3 burners, fixed, wood; to stand at head of pier; visible at 10 miles distant.

The Pendulum Marine Artificial Horizon.

The following letter from an officer employed last summer, in the survey of St. Georges Channel, affords so remarkable an instance where the Pendulum Horizon, alluded to by Capt. Beechey in our last, would have saved both time and anxiety for the safety of one of H.M. ships abroad, in which he happened to be serving, that we cannot resist the opportunity of quoting it here; and our satisfaction in doing so increased on seeing it signed by that careful and well informed officer, the master of the *Lucifer*.

Greenwich, Oct. 15th, 1843.

Dear Sir.—I am sorry that absence from town should have prevented my communicating to you, the opinion I have been able to form of your Pendulum Horizon, tried by us in the *Lucifer*.

The observations in your possession will speak for themselves.* Although a stranger to the instrument I found little difficulty in using it, and am of opinion that a moderately good observer, when accustomed to its use, may at sea, under favourable circumstances obtain altitudes within four minutes of a degree.

The great value of such an instrument must be obvious, and although often placed in circumstances when it would have been invaluable, I will confine myself to one strongly impressed on my memory. In H.M. sloop *Zebra*, on our passage from Hobart Town to Tahiti, we were enveloped in a dense fog between the Snares and Lord Aucklands group, which lasted as nearly as I can recollect upwards of a week. Latterly from the uncertainty of our position, it was consi-

* See last number p. 187.

dered necessary during the night to run a certain number of miles on opposite courses, to endeavour to keep as nearly as possible on ground that had been gone over. Although the fog was so dense that an object could not be seen at the distance of fifty yards, the sun was shining brightly over head, and had your instrumont been on board, I should not have felt the slightest anxiety, as the wind was light, and the water perfectly smooth. Could we by any means have obtained a latitude, even ten miles in error, it would have been most acceptable.

With every wish that it may come into general use.

I remain, &c.,

L. C. Bailey.

[We take the following from the *Shipping Gazette* of the 13th of March.]

Sir.—Among the new inventions of the day, permit me, through your paper, to draw attention to Captain Becher's horizon, which is not so well known to the merchant navy as its merits deserve, for it is calculated to be of essential assistance in navigation. It is a Pendulum Horizon, to be attached to the sextant, and is admirably adapted for obtaining the altitude of the sun at places where the land intervenes, or in foggy weather and no horizon, although there may be a clear sky over head, as is frequently the case—for example, on the Banks of Newfoundland and elsewhere. The instrument affords us the means of obtaining the latitude at times when it could not otherwise be arrived at by observation. Having used the instrument for several years, I unhesitatingly recommend it to the notice of those interested in such matters. For a description of the Pendulum Horizon, with the various uses to which it may be applied, the reader can consult a small pamphlet by the inventor.*

I remain, &c.,

To the Editor of the Shipping Gazette, Henry Davey,
March, 4. *Master R.N.*

The Loss of the Elberfeldt.

Sir.—The recent sudden loss of the Elberfeldt, iron steamer, on her way from Rotterdam to London, and the not long past and still more lamentable loss of the Pegasus, passenger steamer, from Hull to Leith, urge upon us irresistably the necessity of doing something, if not to try and prevent such accidents, at any rate endevour to save the lives of our fellow-creatures when such accidents occur.

In the case of the Pegasus, as is well known, on a fine clear night, with the lights full in sight, the vessel struck on the Megstone Rock, off Holy Island, was backed off, and sunk within a quarter of an hour, in deep water, when upwards of 30 persons perished.

In the recent case of the Elberfeldt, we are told that, "only five minutes elapsed from the first crack till the vessel disappeared;" happily there were but few persons on board and we have only to deplore the loss of three lives; but supposing this steamer had been coming across from Rotterdam to London towards the close of the summer, at a time when our numerous continental tourists are returning home, there is little doubt that she would have had a full freight; since, although the vessel was coming to England for examination and repairs, it does not appear that the least risk was apprehended, or surely she would never have ventured across the North Sea in the month of February quite alone, not even seeking to keep company with one of the steamers that run four times a week. Besides, was not Mr. Bush invited on board to try experiments with his compass? What, then, in such a case would have been

* A complete account of it will appear in our next.

the position of perhaps seventy passengers, including women and children? We shudder to think of the awful crash, the agonising shriek for mercy, the silence of the grave. And why this fearful sacrifice of human life? Not because the Elberfeldt broke in halves, not because the Pegasus struck on a rock; but because the cupidity or culpable apathy of the proprietors, in our steam companies, will not furnish their vessels with proper boats and other means of saving life under such circumstances; for it must be remembered that the weather in which both these accidents happened was such that even a small boat would have lived at sea.

We cannot but look upon this occurrence as a providential warning; a warning that I earnestly trust may be listened to before some more fatal catastrophe takes place.

It appears to me that two points should, at once, be insisted upon by the public:—

1st. That every steamer, except river boats as far as Gravesend, should carry paddle-box or other large boats, one for every 50 passengers; that the oars, rowing crutches, &c., should be always placed and made fast in the boat; that the boat's falls should never be unrove; that the paddle-box boats should not be secured down to the ship, except in very bad weather, and then only by a rope-strap, that could be cut through with one blow of an axe, or even by a sharp knife; that the keel and rubbing pieces on the bottom of the boats should have long holes bored in them, through which a handkerchief might be rove, or which might be easily grasped by the hand in case of need; and that the crew should be exercised in getting the boats out and in at least once a month.

2nd. That no iron steamer should receive her licence till she had been examined by a competent and responsible government officer, to see that she is strongly and securely built; that she is divided into five or more water-tight compartments; and that a distinct and direct communication exists between each compartment and the engine-room, to be opened at will, in order to pump out the water by the engine, in case of springing a leak.

No difficulty and very little expense would be incurred in carrying out these suggestions; and first, with respect to paddle-box boats, for they are very preferable to any other. It is said that their great weight on the sides is an objection. It so happens that I command a steamer of 540 tons burden, which has these paddle-boxes fitted to her; and from the Dockyard books at Woolwich, I find that the whole extra weight beyond the old paddle-boxes, including iron stanchions, davits, &c., is 6 cwt. on each side, a trifle not worth mentioning. We find no difficulty in getting them in and out, and in five minutes both our boats are in the water and ready for use; and for vessels that go on long voyages, fresh water and preserved provisions in water-tight cases, for 50 men for three days, which would not weigh above 6 cwt., might be kept ready; and in the extreme case of a ship sinking suddenly, as the Elberfeldt, the paddle-box boats would float off, bottom up certainly, but if properly fitted they might even then be the means of saving many lives.

All our West India mail steamers and forty government steamers have already been fitted with this excellent invention of Captain George Smith, of the Royal navy (who for the sake of humanity has waived his right to a patent for it), besides many Russian and French steamers, &c. On the wrecks of the mail steamers Isis, Solway, and Medina, 270 lives were saved by these boats alone. How then can our merchants' steamers refuse to take advantage of this simple and excellent means for saving the lives of their passengers?

3rd. With respect to iron steamers; these are increasing daily, not only in our rivers and along our coasts, but in distant voyages. Now, when we consider the enormous weight of engines, boilers, coals, &c.,—namely, 250 tons in a vessel of 500 tons, or half the whole tonnage of the ship, placed as nearly amidships as possible, not occupying more than 40 feet in length in a vessel

* Proposed by Lieut. Church, R.N., see our last volume p. 646.

from 160 to 180 feet long, the necessity of strong and secure fastening becomes obvious. It is this enormous weight right amidships that broke the Elberfeldt in halves, and the same nearly occurred in the Nemesis, iron-armed steamer, that has since performed so distinguished a part in China. Her gallant commander, my old friend, Captain W. H. Hall, R.N., described to me the fearful position that vessel was in, in a heavy gale of wind to the eastward of the Cape of Good Hope, when the openings in the sides, amidships, extended downwards seven feet, 3½ feet under water, on both sides opening and shutting laterally, as the vessel rolled to and fro in a heavy cross sea, to the extent of five inches, while the rush of wind and water through them was terrific. At this juncture, when all seemed hopeless, the captain tried to smile, and by his coolness to encourage his crew; "You may smile, sir," said one of the sturdiest of the men, a hardy boiler-maker by trade, "but you don't know the nature of iron; how should you?" (as if in pity of his ignorance.) "Ah, sir, when once it works and cracks, as our sides are doing now, it's sure to go on, nothing can stop it." And nothing but the merciful interposition of Providence could have stopped it: the gale moderated, and the ship was saved by being run ashore in Delagoa Bay, on the east coast of Africa.

I am no alarmist—I seek not to magnify "the dangers of the seas"—on the contrary, I am of opinion that a well found ship, with plenty of sea-room, is a far safer place in a gale of wind than walking along the streets of London, while, as the old sailor's song says, "the tiles and chimney pots about our heads are flying." But by pointing out distinctly the risk incurred, I wish to rouse the British public to take some steps in order to oblige steam companies and the proprietors of steamers to make their vessels efficient and sea-worthy, and to adopt such measures for the preservation of life, in case of wreck, as the passengers, who entrust themselves to their charge, are entitled to demand.

I am, &c.,

JOHN WASHINGTON,

Harwich, March 2nd. *Captain R.N.*

VOYAGE OF H.M.S. CORNWALLIS.

CANTO THE SIXTH.

Storm and Capture of Ching-Kiang-Foo, on the 21st, July 1842.

My last letter dated the twentieth July,
Brings nearly the whole of the force pretty nigh
To the town of Ching-Kiang, which, as every one knows,
Is a very large city or "Foo." So here goes
To describe in few words how the Tartars defended
Their homes to the last, before the fight ended.
The landing as usual effected by steam,
Commenced before dawn, nor did any one dream,
From the silence and quiet then reigning around,
That aught worth the name of a foe would be found.
The army was split into three grand brigades,
With a party to each of guns, ladders, and spades.
What with currents and some of the ships having struck
On the shoals, it was only by very good luck,
That all hands got on shore in time for the fun;
And, before all were landed, the work had begun.

Lord Saltoun moved first, with all his division,
To attack three large camps which appeared in position,
South-west of the town. The Madras "forty-first,"
And Bengal volunteers, on the Chinese then burst,
With the Queen's "ninety-eighth," and they soon tumbled down,
All their banners and tents. Let us now to the town,
Leaving Saltoun's brigade in the midst of the fields,
Eating cucumbers, melons, and kicking their heels.
The prettiest thing in the whole of the day,
(We saw it quite well from the ships where we lay,)
Was the storming the walls, (which by Cuddy was led,)
With the second brigade, commanded by Shœdde.
At the north-eastern angle his ladders were reared,
While the rifles picked off every man who appeared.
Then over their heads the Auckland threw shell,
And Knowles from a hill threw his rockets in well.
Of the "second" and "sixth" Shœdde's division consisted,
Which with Queen's "fifty-fifth" could not be resisted,
Besides "thirty-sixth." So the walls having gained,
They made but short work of all those who remained.
Colonel Drever was killed in this gallant affair,
And of wounded severely a pretty good share—
Majors Warren and Simpson, Cuddy, Travers and Carr,
And the rest, I must say, I don't know who they are.
General Bartley's division now comes into play,
They attacked the west gate about noon in the day.
"Fourteenth," "forty-ninth," and "eighteenth" Royal Paddys,
Composed this brigade: with the "twenty-sixth" laddies.
Who not having landed so soon as the rest,
The third brigade joined—and with them did their best.
The Commander-in-chief having seen the affair,
With Lord Saltoun's brigade, now bent his steps where
There was work, (for although it had not been so planned)
The tops of the walls were by Tartars well manned.
Our dragoman Gutzlaff, whose correct information
Here failed, nearly caused us some real botheration.
For when the first Tartar was seen on the wall,
He cried, "Sare! I say there are no troops at all!"
The Admiral who thought we should have nought to do,
Attended by Tennant went on with Sir Hugh.
The great grand canal which here crosses the river,
Was said at the town, to be shallow, however
Gough, Hodgson, and Loch disdaining all fears,
To come at the truth, went in head over ears—
And thus found the canal was too deep to be forded,
But a bridge shewed the place where the walls might be boarded.
The navy were not in the "Bill of the Play"
To have had (except landing the troops) aught to say
In the fighting department—unless it required,
To cover the landing some shell might be fired.
But the boats of the Blonde with artillery freighted,
In the famed grand canal got severely checkmated.
Drifting suddenly under the walls of the town,
They received such a volley that most were knocked down;
Their officer, Crouch, got three shot in his hull,
And young Lyon, a mid, got a whack on his skull.
The Artillery major came off in a crack,
To beg Captain Richards would get his guns back;
This was done in a trice, and I'm happy to say,
Our boats on the walls very soon blazed away;
Under cover of which and a rocket or two,
The Marines scaled the walls without much more ado,
Captain Richards led on. And to fill up the names,
Stoddart headed the boats. With the rockets—Fitzjames.

A detachment of "fourteenth" Madrasses (Maclean's)
Had joined us and in the work helped the marines.
Captain Watson was also in time for the fun,
And our Major Uniacke, got a stroke of the sun,
Of which he soon died, and was buried next day,
On the isle of Kinshan, in the river mid-way,
From the top of the wall we went down in the street,
The Chinese who opposed having beat a retreat.
The guard-house on the gate was enveloped in flames,
By small rockets sent from the street by Fitzjames.
And while we were resting and merry making,
General Bartley's division came tumbling in.*
Not aware what had happened the Madras engineers,
Blew the gate in, directed by brave Captain Pears.
"Why how," roared out one "how the deuce came you here?"
"Over all to be sure, which we found just as near".
The burst of the gate was a beautiful sight,
And glad of the chance to contribute our mite,
On this terrible day—our little brigade
By the Admiral joined, a slight movement made,
On the ramparts and sheltered ourselves from the sun,
In a guard-house and found a good dinner just done,
Consisting of bacon, and beans nicely stewed,
And great cauldrons of tea which we found very good.
The heat was intense—Fahrenheit "ninety-six"
So most of us down on the ground slept like bricks.
But two or three vollies below soon began
To disturb us; so into the town we all ran,
Where we heard such a noise, and very soon found,
That the Tartars were hotly disputing the ground.
With Bartley's brigade, the same which of late,
So gallantly rushed "sword in hand" through the gate:
We came on their rear just in good time to meet,
A pretty sharp volley of balls down the street,
From some Tartars, secured by a small barricade,
Which accounts for the very good stand they had made.
The marines charging on, and a few rockets plied,
Fitzjames got a shot through his arm and his side.
While standing quite close to *young* Charley Napier.
The main body however soon ceased to appear,
Being pretty well licked before we came near.
The town being taken; the Tartars then living,
Either strangled or drowned themselves or their women.
Many cut their own throats, and our men cut some down,
Who were hanging in different parts of the town.
Our wounded and killed (with those struck by the sun,)
Were (counting three missed) fourteen dozen and one.
The brave Tartar chief whose name was Hailing,
Having first of all sent an account to his King
Of the fall of the town, and devotion of those,
Who fought to the last; made a pile of his clothes,
Wife, children, and goods, and ascending the mass,
Made a blaze of the whole, with himself,—like an ass.

H.M.S. Cornwallis, off Ching-kiang-Foo,
26th of July, 1842.

* As they were in glee and merry making—heigh ho, says Rowley,
The cat and her kittens came tumbling in,
With a rowley powley, gammon and spinnage."—Nursery Song.

Nautical Notices.

St. Benedict Island.

Mazatlan, Dec. 6, 1843.

Sir.—Should the following communication be of service, it will probably find a place in the *Nautical Magazine;* if, on the other hand, you are in possession of matter relative to it, I must apologise for troubling you.

Schooner Denia from Guayaquil to Mazatlan, Nov. 18th., 1843, at noon, in lat. 18° 30′ N., long. 110° 9′ W.; at 1 p.m. sighted the island of Socorro bearing W.b.N. ½ N., fourteen leagues, which according to Sir E. Belcher's position of the island, proved our chronometer, I may say, correct.

A few days previous to my leaving Liverpool in March last, Sir E. Belcher's "Voyage round the World," was sent me from London, and in the first volume, page 346, Sir E. Belcher says, "We ran over the position of St. Benedict island without noticing anything like land; and on the 25th December hauled to the south of Socorro, about 4 p.m. having ascertained our position by evening sights, and that the land ought to be visible. I went on deck to examine the horizon, and fortnuately discovered its summit on our beam."

Page 347.—"I found this island to be placed fifty-two miles farther to the west than laid down in the charts, but its latitude correct."

From the the above I may infer Sir E. Belcher has not given any account of St. Benedict in the Survey of the *Sulphur.*

It occurred to me, that Socorro, being fifty-two miles out in longitude, St. Benedict might be also, if discovered by the same "Navigator;" and Sir E. Belcher passing over its assigned position would not see it, as he hauled to the south, and could only see the summit of Socorro (which is high,) on the beam, when in its parallel.

At sunset Socorro bore W.S.W., about seven leagues, wind variable from N.N.E., light breeze and fine weather; 8 fathoms; tacked to the eastward; and at 4 a.m. on the 19th November, tacked to the north-west, wind in the same quarter, with fine weather, and a clear horizon, making sure if St. Benedict existed, we must sight it.

At noon latitude observed 19° 18′ N., long. 110° 20′ W., we discovered land bearing west, making like three islands. At 3h. 30m. p.m. it bore W.S.W. about six leagues; at 5h. 30m. p.m. S.S.W. about four leagues.

The island lies N.N.E., and S.S.W., about six or seven miles long, which is the St. Benedict of Don Felipe Bauza, in a chart by that officer of 1794, and published by the Admiralty, but placed fifty-two miles too far east; latitude correct, its height about 1100 feet.

After leaving the islands we had very light winds, mostly from N.N.E., and calms, and did not arrive here until the 28th.

I am, Sir, &c.,

J. H. Smith,
Master of the Denia.

Galt Reef, *Java Sea.*

Sir.—I beg to report to you the existence of a dangerous coral reef, upon which my vessel struck, and was subsequently wrecked, on my passage from Sydney to China. It is situated in lat. 7° 16′ S., and long. 114° 44′ E., with the south-east end of the small island of Raas bearing N.W.b.N. distant about five miles. It is in the fair way between the Straits of Lombok and the entrance into the China Sea,—it is thirteen feet under water and will not be perceived until within a short distance of it, for when it was first seen by the man at the mast head, we had not time to haul the ship by the wind before she

struck. It is most probably a coral reef which is fast springing up, and no doubt in the course of time will appear at the surface of the water. I reported the above to the commander of the Dutch schooner of war Zephir that came down to the wreck to our assistance, and also to the Dutch Admiral at Batavia, and I now wish to give it greater publicity through the medium of your pages.

I am, &c.,

SAMUEL GALT,
Late Master brig Islay of Sligo.

PILOT STATION *off the Mouth of the River Hooghly.*—The experience of a second season's trial of the New Pilot Station off the South channel having established that it can be made by vessels from False Point with the greatest facility, and that pilots can also be readily supplied, and the same cause existing which during last south-west monsoon rendered necessary the removal of the pilot station from off Point Palmyras to a position about 15 miles S.W.b.W. of the outer floating light in lat. 20° 56′ N., long. 88° 03′ E., and in from seventeen to twenty-two fathoms water, Notice is hereby given, that this latter station will in future be continued during the south-west monsoon, viz., from 15th March to the 15th September.

No difficulty can possibly be felt in passing from False Point to the New Station, if common attention be paid to the lead, and to the following directions, prepared by Captain Lloyd, late Officiating Marine Surveyor of the ground between the two points:—

False Point light-house is in lat. 20° 19½′ N., and long. 86° 47′ E., and the South Channel Buoy in lat. 25° 59′ N., and long. 88° 4′ E., and bears from the light-house N. 61° E. true, or N.E.b.E. ¼ E. by compass, distant 83 miles, and is laid in 12 fathoms.

A bank of soundings extends from off Point Palmyras in a direction towards the tail of the Western Sea Reef, and the nature of the bottom (as distinguished from that of the Hooghly deposit, which is sand and mud with shining specks,) is a gravelly substance composed of sand, shells, and small pebbles, discharged from the Kunka and other rivers near Point Palmyras, the lighter material of which being carried further out, is deposited and forms what is called the Pilot's Ridge, which, in crossing to the N.W., shews a little less water than on either side; in coming from seaward you shoal rather suddenly from 28 to 23 fathoms upon its eastern edge: it is composed of a shelly sand, or minute gravel, of a reddish or rusty brown colour.

The best guide therefore to enable a vessel to direct her course from False Point to the vessel at the New Station will be to run down the edge of the Pilot's Ridge, which can readily be done by making the light-house, and bringing it to bear about W.S.W. or S.W.b.W., distant by computation ten to fifteen miles, then steering to the E.N.E., and having gradually increased the depth of water to 23 fathoms upon the eastern edge of the ridge, regulate the course to keep between it and 27 fathoms, when by attention to the lead, and nature of the soundings, course, and distance run from the light-house, it is almost impossible to miss the Pilot vessels (if the above limits are kept within) either by getting too far to windward or falling to leeward, for the soundings increase so rapidly to seaward from the proposed New Station, that 28 fathoms will not be more than three or four miles to the southward of it.

The soundings to seaward of the ridge are in general a greenish or olive-coloured mud, with occasionally a few bits of broken shells mixed with it.

Vessels approaching the Station during the day are required to shew the usual signal for a pilot, and by night to give as early and as much warning as possible, by firing guns, burning blue lights, and by exhibiting two lights in a vertical position where best seen; but Commanders are strictly enjoined to avoid, as much as possible, making the station during the night.

To mark the Station (until a proper light-vessel is built, of which due notice will be given), one of the Pilot vessels will shew, during the day, a large St. George's Jack (white with red cross) at the main-top-gallant-mast-head, and a good mast-head light during the night, and will burn a blue light and a maroon alternately every half-hour, and fire a gun at 8 P.M., at midnight, and at 4 A.M. Vessels approaching the Station, and while there as well as when approaching the light* and Buoy Station vessels, are warned to be careful in avoiding collision by night or by day; and in communicating with either of the above vessels, either at anchor or hove-to, when it is necessary to cross her, to pass under the stern, several instances of serious damage having occurred during the south-west monsoon, whereby the Outer Floating light was more than once compelled to leave her station for repairs, to the great inconvenience and risk of vessels entering and quitting the river.

* The Light-vessels are directed, when another vessel is approaching during the night, to shew a light at the Gaff, and mark the way they are riding.

JAMES C. MELVILL, *Secretary.*

Trinity-House, Mar. 12, 1844.

BUOYS IN SWANSEA BAY.—Notice is hereby given, that this Corporation has caused buoys, as hereunder described, to be placed in the following positions, upon the "Hugo" Bank, and "Inner Green Grounds" in Swansea Bay, viz.—*Hugo Bank*,—The buoy on this bank is coloured Black, and lies about one cable's length from the dry sand on the north-east side of the bank, and with the following marks and compass bearings, viz.—

Kenfig Church, its breadth open South of a white cottage, the northernmost in the village,	E. ½ N.
A large square house, on with the sound end of the large store house at Porth Cawl	S.E. ¼ E.
Nash Lower Light Tower	S.E.b.S.
Mumbles Light Tower,	N.N.W. ½ W.
Constantinople Cottages,	N.E. ½ N.
East Skerweather Buoy,	South

Inner Green Grounds.—This buoy is coloured red, and lies in 3½ fathoms at low water spring tides, about 1½ cable's length from five feet upon the south-east end of the shoal, and with the following marks and compass bearings, viz.—

Kilvey Old Mill, one-third distance from the Inn, (a large Brick house) towards Tennant's Look-out-honse,	N.E.b.N.
The Tutt, on with the middle Island at the Mumbles,	W. ½ N.
Mumbles Light-house,	W. ¼ N.
Woodland Castle,	N.W. ½ N.

By Order, J. HERBERT, *Secretary.*

BANK OFF C. ST. THOMAS, BRAZIL.—On December 6th, A.M., running for Rio, found the water very much discoloured, sounded in 35 fathoms sand, at 10h. sounded in 25 fathoms; at noon lat. 21° 44′ S., long. 39° 35′ W., then 16½, shoaled the water gradually, until we had in the starboard chains 15 fathoms; in the port chains barely 9 fathoms. This continued until 4h. P.M., and then shoaled to ½ 12 fathoms, going three knots, breeze increasing, then deepened to 16 and 17, and shoaled again to 12½. At 4h. no bottom with 20 fathoms, at 5h. leadsmen in. Lead hove every half hour till midnight. C. Frio bearing at noon S.W.b.W. ½ W. 140′ C. S. Thome W. ½ S, 80′ Esperitu Santo N.N.W. ½ W., 109°,—*Extract of letter from Capt. Jervis, of H.M.S. Pilot, dated 13th Dec.*, 1843.

There is no shoal or bank in any chart laid down so far off, in the above

latitude and longitude, although the soundings shew the bottom to be very uneven. Vessels on this passage to Rio from England would find in strong breezes a heavy swell there, the current set the *Pilot* to the south-eastward about thirty-two miles in the twenty-four hours.—Ed.*

Light at I. St. Thomas.—*West Indies.*—A Lighthouse has been erected on the south-east point of the harbour of St. Thomas, distant 400 feet from the sea. The light was to appear in the course of the month of March, at an elevation of 95 feet above the sea. Vessels going into or out of the harbour should remember that the easternmost angle of the lighthouse on with south-west corner of the Small Kitchen to the north of it clears the Triangles by a cable's length.

The Needles' Light.—There is not a finer harbour of refuge round the coast of England than that within the Wight; yet in bad weather, the present Needles' Light can seldom be seen, on account of its extreme elevation. Such a mist obscures it during tempestuous weather that it is worse than useless; for unfortunately mariners making the Solent will catch a glimpse of it afar off, but no sooner approach to it than it is hid from view. The remedy is happily easy, and we beg to recommend it to the serious attention of the Trinity Board, as being the opinion of the most experienced officers weekly using the passage, namely, to put another light just above the outer Needle rock, but building the house behind it, so as to have it protected. The exact height will be best ascertained from the information of the officers we have referred to, but that of Hurst Castle would be the most advisable. The officers we refer to state there would then be no danger—but constant certainty. If it is not done, the loss of one of the West India Company's vessels may perhaps attest the frightful danger there is at present. The fact is, that almost all the homeward vessels which remain outside the Wight in bad weather, would come through the Needles' passage if they were sure of their safety. The *Clarendon* would not have been outside if she could have got into the Solent, and so of many other vessels wrecked. With the anxiety of the Trinity Board to render the Light-house system complete, we feel sure that we have only to draw their attention to this plain but most important fact, to induce their immediate attention to it. —*Portsmouth Herald.*

Passage from Hong Kong to Chusan—Kumi Shoal.—I am happy to say I had a regular fine weather passage up; left Hongkong on the 2nd of this month (November) and arrived here on the 22nd; had many calms and light winds, and never more than one reef in the top-sails. I was holding on against the current and swell for the greater part of the first three days, worked round the south-east side of Formosa on the 13th, and kept on that coast up to Samassanna Island; then stood to the eastward to find the easterly winds which you generally meet with to the eastward of Formosa. On the evening of the 16th with Kumi Island (lat. 24° 25′ N., and long. 123° 5′ E.,) bearing E.b.S. three leagues, saw heavy breakers ahead and on the lee bow, apparently on a dangerous shoal extending E.b.S. and W.b.N. and bearing from Kumi Island S.W.b.W. 3½ leagues. Having dark cloudy weather with rain and a heavy sea running, it was too late to send a boat to sound, but we saw the breakers continually from 4h. 30m. P.M. until 6h. P.M. The shoal is right in the fair track of ships coming up in this monsoon, I should say.

When running for the islands I kept 80 miles to windward to allow for the current, but there was none, for I fetched just as much to windward, and made Monte Video in lat. 80° 7′ N., long. 122° 46′ E., at 8. A.M. on the 21st. I

* Mr. Bateman has our best thanks for his communication respecting this shoal.

think every ship bound to the northward ought to work pretty close round the south-east Point of Formosa and inside of Botel Tobago Xima, and not out through the Bashees, because as soon as you round the point, you get smooth water compared to the boiling sea a few miles further south, and also a strong northerly current.—*Bombay Summary.*

We learn that the Dutch have hoisted their flag, and are rapidly extending their influence over the two beautiful and fertile islands of Bally and Lombock. On the former island, at the port of Badong, the Netherlands Handle Maats-chappy are constructing extensive premises, enclosing upwards of two square acres of town land, for the sale of their piece goods, and have farmed from the Rajahs of Badong the whole of the duties of that district. They have also within the last twelve months prevailed upon one of the Rajahs to prevent a French subject, and likewise an Englishman, from trading with the natives or remaining on the island, although these persons offered to pay the duties and conform to the laws of the country. The Frenchman, a Mons. L'Moyeur, returned to Bourbon in February last, having been a pecuniary sufferer to a large amount. Our countryman, who had been above three years on the island, was treated in even a harsher and more extraordinary manner, having been not only forbidden to remain on the island, but forcibly taken to Java and detained there upwards of a month.

We hope that some enquiry will be made by Government, as certainly it seems a very extraordinary proceeding, if our information is correct, and we see no reason to doubt it.—*Singapore Free Press.*

Decisions in the Admiralty Court.

Mary Stewart.—*Collision.*—An action to recover the amount of damage sustained by collision between this vessel and the Juno, on the 5th of June last off Yarmouth jetty. The court was assisted by Captains Nelson and Riley, who were of opinion that the blame was attributable to the Mary Stewart, and the court, therefore, condemned her in the damages and costs.

Lord Auckland.—*Wages.*—In this case the Court pronounced in favour of a claim for seaman's wages.

Speed.—*Collision.*—A cross action between the owners of the barque Thames of Newcastle, and those of the Speed, a large timber vessel, belonging to New Brunswick, to recover the amount of damage which each vessel had sustained in a collision that occurred in the river St. Lawrence, near Orleans Island.

Captain Weynton :—We are of opinion that the vessel sailing from Quebec had a fair wind ; the wind was free ; we see nothing in the evidence to make us conclude otherwise, when the collision took place. It being a received rule that a vessel going free should avoid those going by the wind, we think that the Speed attempting to cross the bows was an improper act. Had she kept her course she would have gone clear. We therefore exonerate the Thames from any blame. We think that the blame was attributable to the Speed.

The Court :—I pronounce for the claim of the Thames against the Speed both as to damage and costs, and I dismiss the other action with costs.

Wrecks of British Shipping.

(Continued from p. 186.—cs. crew saved—d. drowned.)

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Active 105	St. John, NB	Brint	St. John	Boston	Long Island	Jan. 12, cs
Am. Reid	Arbroath	———	———	———	Founderd	Feb. 8. cs
Asenett	Sunderland	Banfield	Sunderland	———	Hasbro' S.	Feb. 20, 1d
Blackbird	———	———	———	———	Welheugh R.	Feb. 26, cs
Boliver 110	———	Wheate	Sierra Leone	England	Abandoned	Oct. cs
Charlotte Ann	St. John, NB	———	———	———	Gr. Manan	Jan. 13, cs
City of Carlisle st.	———	Proudlove	Honfleur	———	Dog Bank S.	Feb. 27, cs
Caledonia	Inverness	McLeod	London	Inverness	Off Pitrellie	Feb. 24, cs
Farmer	———	Duncan	Clackmana	———	Dundee	Feb. 23, cs
Fontonoy 115	Maldon	Eavery	———	———	Foundered	Feb. 15, cs
H. Malvina	Newcastle	Fenwick	Newcastle	London	Scroby Sand	Feb. 20, cs
Home	Newcastle	———	———	———	By fire	Feb. 20, cs
Iris	Hull	———	Ipswich	Fradrington	Mumby	Feb. 27, cd
Lark	———	Martin	———	St. John, NB	Digby Gut	Jan. 21, cs
Maria 120	———	Moull	St. Andrews	Jamaica	Holland B.	Nov. 26, cs
Martha and Mary	———	Davies	Liverpool	Rotterdam	Holland C.	Mar. 3, cs
Mary	Sunderland	Loney	———	———	Pellier	Jan. 15, cs
Mary Ann	———	———	———	———	———	———
Merlin	———	Blacklock	Honfleur	Blyth	C. La Heve	Mar. 3, cs
Newcastle 125	———	———	Newcastle	Aberdeen	Off Aberden	Feb. 25, cs
Oriental	———	Dunn	Liverpool	Alexandria	Off Malta	Jan. 24, cs
Oswy	———	Pilbeam.	———	———	Worthing	Feb. 24,
Owen Glendower	———	Williams	Harwich	———	Schulan	Feb. 20, cs
Redcliffe	———	Collins	Faro	Bristol	Abandoned	Feb. 20, cs
Sarah 130	Barking	Brady	———	———	By fire	Feb. 22, cs
Sally	———	———	———	———	———	cd
Splendid	Stromness	———	Liverpool	Newcastle	I. Helsker	Feb. 15, 1d
Sterling	Yarmouth	———	———	———	———	Dec. 25,
Symmetry	———	Palim	———	Maldon	———	Mar. 9,
Therese 135	Devonport	Nichols	Newport	———	Plymouth	Mar. 9,
Thomas & William	———	Cooper	———	———	Linconsh. C.	Feb. 23, cs
Unity	Rochester	———	———	———	Jason P.B.	Feb. 19,
Urchin	———	Ruthford	Trieste	London	Brindisi	Feb. 1, cs
William	———	Kellett	N. Shields	London	Herd Sand	Feb. 24, cs
Wm. & Nancy 140	Leith	Armour	Imrktkng	Sheerness	Sunk Sand	Feb. 20, cs

107—Run foul of by brig Rose.

115—Run foul of by Garland.

123—Crew arrived at Sydney, New South Wales, in the Rose steamer, in October.

126—Run down, supposed by the St. Lawrence, crew saved by boat; picked up by the Rover of Jersey, and landed at Tunis.

131—Found by crew of Mary Ann a wreck, and crew drowned.

133—Found dismasted and waterlogged in 39° N., 67° W.; fallen in with by brig Maitland. Every thing gone off deck. Four dead bodies found; appeared to have been some days in that state.

134—Run foul of; crew saved by the Elizabeth, Adnett, of London.

On the Mariners' Compass.

Portsmouth, March 20th, 1844.

Sir.—I have read Mr. Walker's remarks on the above important instrument, in your number for March, and although I am not a seafaring man, nor a compass-maker, I am induced to offer an observation on the point of friction noticed in page 157. If I understand Mr. Walker, the hole in his compensation regulator, through which the vertical centre or pivot is to pass, is to be only one hairs' breadth larger than the diameter of the pivot.

On a drawing-room table or on the deck of a ship in a motionless

sea, the card would, no doubt, act freely; but when there is any sea on the vessel, each wave will cause a concussion that will bring the compensation regulator in contact with the centre, and then the card will vibrate, and the succession of waves will keep it in constant motion.

The compass bowl, being hung in gimballs, provides for the ordinary motions of rolling and pitching; but will not protect the instrument from the concussion above referred to. I am quite aware, the more friction you can introduce without hindering the free action, the steadier the card will be; but, I think, I may say, without fear of contradiction, that the *friction must be confined exclusively to the extreme point of the vertical pivot*, or it is not possible the card can act freely.

The broader the point of suspension is, whether it be of metal or of stone, so long as the free action of the card is preserved, the more valuable will be your compass.

I am, &c,

To the Editor, &c. A Practical Engineer.

The Royal Naval School.

[We take the following from the *Naval and Military Gazette.*]

At last England will have a Royal Naval School. Her Majesty is the Patron, and Prince Albert the Great Mason, who laid the foundation-stone on the last anniversary of Lord Howe's victory. This School, situated at New Cross, near Deptford, will be capable of admiting 400 boys, and they will receive the best classical and mathematical education, founded on the established religion of the Church of England. The children of those Officers who have fallen in the service of their country will be educated and boarded almost gratuitously—and those of other Officers for the trifling sum of 25*l.* per annum.

The centre of the building, one wing, and the infirmary, are completed; but we regret to say the funds already subscribed are inadequate to carry out the views of the Council, and to finish the building according to their intentions. It is with the hope of obtaining further aid that we now introduce the subject to our readers. Surely we may venture to ask from each Officer of the Navy and Marines who has not already subscribed annually, the trifling sum of one day's pay—only one day's pay—to contribute towards the education of the sons of those old companions who have perished in the service of the country. Here is absolutely a great charity; for what can better support the orphan through life than education which may enable him to overcome want, and rise above the grovellings of ignorance? By such charity you give a chance to the poor unprotected boy to rise by his own exertions —you call into action all the powers of his mind—and, from being despised and almost entirely neglected, place him in a position to be useful to his country, and the stay and support of his family

To all Officers whose pecuniary resources leave them independent of this charity, we appeal in the name of those brother Officers to whom fortune has been less propitious: to those who have risen to high fame,

rank, and distinction, we appeal in behalf of those children whose fathers have fallen in their country's service; and to that country, the fame of which has been enhanced, and whose honour has been upheld by the brilliant achievement of her Navy, we appeal with confidence in behalf of those who may hereafter adorn the page of history, and who look to that country for support and education as a recompense for the great services of their parents.

THE PRINCETON.—The *Times* correspondent (a Genevese Traveller) writes—"A great object of interest to our citizens at this time is the United States war-steamer Princeton, just built under the superintendence of Captain Stockton, which now lies in this harbour, and is daily visited by crowds of interested spectators. This steamer is constructed with Ericsson's propeller. Its steam machinery is placed entirely below the water line, out of the reach of shot. Its engine is extremely light and simple of construction, occupying only about one-eight of the bulk required by the ordinary British marine-engine of the same power. It gives a direct motion to the axis of the propeller without the aid of cog-wheels or auxiliary gearing of any description. It is styled the semi-cylindrical steam-engine, and is the invention of Captain Ericsson. For the vast power which it includes in so small a compass, and for the exquisite symmetry and proportion of all its working parts, this engine is the theme of general admiration. The armament of the Princeton includes two huge wrought iron guns (introduced by Captain Stockton), placed one at each end of the ship the largest weighing 10 tons, and with a bore of 12 inches, carrying a ball of 213lbs. This gun is placed on a wrought iron carriage, also contrived by Captain Ericsson, and which, without the use of the ordinary breaching, checks the immense recoil, and the vessel suffers but a very slight shock from the discharge. By means of this carriage this huge gun is managed by half-a-dozen hands with perfect facility. The peculiarity of the steam machinery of the Princeton, and its being placed out of the reach of shot, are supposed to give her obvious advantages over all other steamers now afloat intended for naval warfare."

Frightful Calamity.—The Britannia brings intelligence of a very frightful calamity, by the explosion of the newly-invented gun of the Princeton, of which so much has been said of late. By the bursting of one of the great guns of this vessel, the Secretary of State, Mr. Upshur, the Secretary of the Navy, Governor Gilmer, Com. Kennon, Chief of the Bureau of Construction of the Navy, Vigil Maxey, Esq., and Mr. Gardiner, of Southampton, New York, were instantly killed, and six sailors are reported badly wounded.

It seems that on the morning of the 29th ult. the Princeton made an excursion, having several hundred guests on board. The ship proceeded down the river below Mount Vernon, and on its return, when in about twenty minutes run of Alexandria, the large gun on the bow was fired, it being the second or third time it had been discharged with ball, and the usual service charge, and, exploding at the breach, spread death and destruction on the deck! Besides the victims that are named above, it is said several of the gunners, crew, &c., belonging to the ship, were killed or mortally wounded, and several others are missing. The breach of the gun was severed. It was the iron fragments, it is supposed, which struck down so many on board. The President of the United States, who was on board at the time of the explosion, escaped unhurt. Almost all the ladies, 200 in number, were below at dinner when the catastrophe occurred, but, during the two discharges of the gun they were on the deck; and many of them approached very near to observe the course of the ball after it had struck the water. This large piece of ordnance carried a ball of 230 lbs. weight.

Smith's Screw.—We were in error in stating, on a late occasion, that the Screw was an "English Invention;" at least so far as that implied that its invention was exclusively our's. We believe that it may be claimed equally, if not primarily, as a French discovery; and that on this account Mr. Smith's patent did not extend to France. The French have experimentalized perseveringly; they began with one whole turn to the screw, which, we believe was our first beginning also;—they then tried two half turns, which was an improvement; they then went up to five detached pieces; and finally adopted four pieces, making a quarter turn each, when the maximum of speed and the minimum of vibration seemed to be attained. Models of each screw and the results carefully noted, were preserved. The last screw tried in the *Rattler* was of three pieces. The results of all the French experiments have, we presume, been known to our engineers for months past. The models were on board the Napoleon in Portsmouth harbour last summer, and any one might look at them and hear the opinions of those on board.—*Portsmouth Herald.*

Steam Boat Ventilation.—One of the Addiscombe professors, Lieutenant Cook, R.N., F.R.S., has invented a method of ventilating steam boats, which promises fair to add materially to the comfort of passengers by these vessels. A cylinder—in which a solid piston moves air-tight—has two valves at each end; through one, opening inwards, fresh air is admitted into a vacuum; which is, by the action of the piston, forced through the other valve at the same end, opening outwards into tubes, and by these conveyed to every cabin upon each deck; while the hot, or foul air, is at the same time drawn off from these cabins into a vacuum above the piston, through a valve opening inwards, from whence it is finally ejected through a fourth valve opening outwards into the open air. The effect produced will, of course, depend upon the size of the cylinder and this upon the size of the vessel.—*Times.*

Heroic Conduct of Lieutenants Catwell and Vansittart, R.N.—On Wednesday, the 13th Dec. as the men of Her Majesty's ship *Agincourt* were exercising aloft, one of them, unfortunately, lost his hold, and fell from the main-yard-arm and striking against the rigging, bounded with frightful force from the spare-topsail-yard, and fell insensible into the sea. Lieuts. Catwell and Vansittart instantly dashed overboard after him; the former officer was, however, from his position, unable to make way against the tide, and reach the sinking man; Mr. Vansittart was near to him, and with almost superhuman exertions (being burdened with the whole of his uniform,) saved the poor fellow's life, supporting him a considerable time until a boat could be lowered.—*Hong-Kong Gazette.*

[The following letter, containing the melancholy intelligence of the death of a brave young officer, while attempting to save the life of a fellow creature will be read with painful interest;—

H.M.S. Tartarus, Tarbert Roads, March 12.

"During yesterday this road was visited with a tremendous gale from the westward. The Knight of Glinn's yacht having broke adrift from her anchor with a man on board, Lieut. Com. Nicholls, of the *Dwarf*, with a view to render the man assistance in this dangerous position, jumped into his gig with four of his crew. The yacht having by this time been driven to a considerable distance, he hoisted his sail with the view of reaching the vessel sooner, when it unfortunately jibed, and the boat went immediately over. This melancholy catastrophe was seen at the same moment by the *Fox* and the *Tartarus*, and a pinnace with no less alacrity was dispatched by the *Fox* to the scene of danger, which by this time was well off the anchorage. Lieut. Nicholls and one of the crew had been stunned, and disappeared—the other three men were saved; and thus the service has been deprived of a most promising young officer, who leaves

behind him a widow, now residing here, and only three months since their marriage."

Awful Calamity—*Nine lives lost.*—Lieutenant Victor, R.N. and his crew, consisting of eight men, in going down to the hulk at Garmoyle, near Belfast, were upset in a squall, and, melancholy to relate, all were lost.

New Charts.

(Published by the Admiralty, and Sold by R. B. Bate, 21, Poultry.)

The Mouths of the Rivers Nunez and Componee.—*Surveyed by Capt. Belcher*, R.N., 1831.

The West Indies, Sheet XI, *From Point Manzanilla to San Juan.—Surveyed by Com. E. Barnett*, 1837.

Lobito Bay, Elephant Bay, *Western Coast of Africa.—By Com. H. J. Matson*, 1840.

A place affording safe anchorage, and some resources pointed out in our last number, (p. 139,) but unheard of before discovered by Com. Matson.

Beirout Bay.—*Surveyed by Mr. C. H. Dillon, Master* R.N., 1842.

The Victoria Deep, *leading into the Victoria Channel.—By Capt. F. Beechey*, R.N., F.R.S., 1844.

The account of this new feature in the approaches to Liverpool, appears as follows on the chart before us, and may assuredly be of great service to vessels in foggy weather bound to that port.

"The Victoria Deep, as shewn by the above lines of equal soundings, is a remarkable hollow of the bank in the approach to the River Mersey; it extends seven or eight miles N.W.b.W., by compass, from the Bell Beacon; and will be found in thick weather an excellent guide to the Victoria Channel. Along the middle of this hollow there are generally 4 fathoms more water than immediately to the Southward of it, and from 1 to 2 fathoms more than to the northward; so that by steering N.E.b.N. or S.W.b.S. in order to cross the line of direction of the Deep, and by rapidly sounding, a vessel cannot fail to drop her lead in it. When found, follow the deep water, but occasionally feel the edge of the South Bank for greater certainty, and a S.E.b.E, course will lead up to the Bell Beacon. When coming either from the Northward or Southward, by maintaining a depth of 9 or 10 fathoms a vessel must hit this Deep, but if kept out in 14 fathoms she will pass outside of it. If a vessel should have stood well in to make the N.W. Light Ship and have failed, let her steer N.N.E. and she will surely fall into the Victoria Deep.

The Kweshan Islands.—*China.*

This chart has received a considerable addition in the large inlet of the coast south-west of the Chusan Islands, called Nimrod Sound, from the trigonometrical survey made under the direction of Com. G. F. Hustings, by Lieut. H. H. Hewett, I.N., Mr. F. Edington, master, Mr. H. G. Simpson, midshipman of H.M.S. *Harlequin*; and Mr. F. S. H. Twynam, midshipman of the *Medusa.*

Akaroa Harbour.—*New Zealand.—By Commander Owen Stanley*, 1840.

In our February number we recorded the appearance of a chart of Syra, another specimen of this officer's industry and talents.

Tripoli or Tarablous.—*By Mr. B. H. Dillon, Master of H.M.S. Vernon*, 1843.

This plan as well as that of Beirout, by the same officer, reflects much credit on their author, in shewing a desire to make himself of permanent service to his brother seamen.

NAVAL INTELLIGENCE.—*From the Portsmouth Herald.*

THE Lords Commissioners of the Admiralty have been pleased to direct that all officers invalided or superannuated abroad prior to the 1st of April next, when the "Queen's Regulations" shall take effect, shall be paid according to the existing regulations.

The *Prometheus* steam-vessel, 6, Lieut.-com. Pasco put back from her voyage to the Coast of Africa, with disabled boilers, has arrived at Woolwich. We understand that she is to be paid off, and fitted as a store vessel. The engineer, it is said, is to be tried by court-martial, at Portsmouth, on a charge of neglect of duty. The *Prometheus* has since arrived at Portsmouth, to have her boilers repaired.

The *Albion*, 92, Captain Lockyer, C.B., was the only ship of war at Lisbon on the 7th inst.

The *Fisgard*, 42, Captain Duntze, according to letters of the 20th Nov. was shortly to proceed to the Sandwich Islands from Valparaiso.

The *Sapphire*, 26, and *Rattlesnake*, 26, troop ships, are on their way to England from China, having on board a large number of invalids, and part of the 55th Regiment.

The *Tortoise*, store ship destined for Ascension, having on board the new Governor, Commander Finlaison, has put into Plymouth to land the Master Attendant of Chatham Dockyard and his party of riggers, being ordered to convey the *Forte* frigate to Deptford, to be broken up.

The *Collingwood*, a fine new 80-gun ship, upon the lines of the *Vanguard*, is ordered to be brought forward for immediate commission, and is to be the flag ship on the South American station. She was brought down the harbour yesterday for the purpose of being masted.

The "*Saucy Arethusa*"—The *Arethusa*, now employed in the quarantine service at Liverpool, is to yield her gallant name to some embryo frigate, and henceforth is to be known as the *Bacchus*.

The *Shannon* and the *Chesapeake*,—The name of the brave old *Shannon*, 46, is to depart from her, but its glorious association with that of the *Chesapeake*, and one of the brightest pages of our naval history, will be perpetuated in another crack frigate ordered to be laid down. The *Shannon*, now a receiving ship at Sheerness, is in future to be called the *St. Lawrence*.

The *Dolphin* brigantine, Lieut. W. O'Bryen Hoare, commanding, captured three more slavers on the 2nd of January, off the Isle of Porcus, 160 miles south of Rio. Two of them had unfortunately landed their slaves.

The *Rattler*, Screw-propeller steam vessel, has been on several experimental trips from Woolwich during the past and present weeks. We understand the result of them is such that it is not likely any other vessel in her Majesty's service will be propelled by that principle. She lost another screw on Wednesday.

The freight ship *British Sovereign*, will leave Deptford for Gravesend on the 1st of April next, to embark detachments of the 27th Foot for the Cape of Good Hope, and the 90th for Ceylon, then proceed to Portsmouth, and embark detachments of the 12th Foot for the Mauritius, and the 91st for the Cape.

The *Pilot*, 18, Com. Jervis, having on board supernumerary officers for the flag-ships *Cornwallis*, 72, and *Agincourt* 72, left Simon's Bay for China December 20th.

The *Bonetta* brigantine, has been recently commissioned by Com. Brock,

for surveying service in the Mediterranean; and the ketch *Sparrow*, by Lieut. Otter, for like Service on the North coast of Scotland.

The *Iris* corvette, Captain Mundy, arrived at Madeira from the Cove of Cork on the 14th January, on her way to the East Indies and China, by the route of Rio de Janeiro.

The *Thalia*, 42, Capt. C. Hope, was to leave Bombay for England on the 8th February last, taking the following route for this country:—From Bombay to the Sandwich Islands, touching at Sydney, thence to the Columbia river, Lima, and round Cape Horn.

The *Gladiator* and *Samson*, steam-frigates, building at Woolwich, are rapidly progressing. The former is planked and the latter is about half in frame, while the remainder of her frame is together, and ready to put in place.

At Portsmouth—In Harbour—*St. Vincent*, *Victory*, *Excellent*, *Victoria and Albert*, *Black Eagle*, *Nautilus*, *and Echo*; *Prometheus, and Fearless*, steamers.—In Dock—*Prince Regent*, *Rodney*, *Atholl*, *and Lily*.—At Spithead—*Lloyds* (East Indiaman).

Devonport, Mar. 21.—The *Styx* steamer, Capt. A. T. E. Vidal, arrived on Friday from Woolwich, has been paid wages, and sailed again yesterday to survey the Western Islands. The *Dee* steamer, Mr. T. Driver, Master, sailed on Friday for Cork.

In Harbour—*Caledonia*, *San Josef*, *America*, *Larne*, *Adventure*, and *Confiance*. In the Sound.—*Tortoise*.

Sheerness, Mar. 21.—The *Camperdown* was taken into the basin and docked on Tuesday, to have her water-pipes examined, which having been done, she was undocked and taken to her moorings this day.

The *Dædalus*, 42, was taken into the basin on Monday, and was masted yesterday. She proceeds to Woolwich, the first opportunity, to be razeed by Mr. Oliver Lang.

The first-class steam ship *Vulture* will shortly be completed for commissioning.

In Harbour—*Camperdown*, *Ocean*, and *Raven*. In Dock—*Ganges*, *Æolus*, *St. Lawrence*, (late *Shannon*,) and *Cygnet*.

H.M.S. on the Coast of Ireland.—*At Cove*—The *Volage*, 26, Capt. Sir W. Dickson, Bart., with the flag of Rear Admiral Bowles, C.B.; and steam-vessels *Meteor*, 2, Lieut. Com. Butler, *Pluto*, 2, Lieut. Com. Crozier, *Alban*, 2, Lieut. Com. Jeayes, *Lucifer*, 2, Com. Frazer, *Dee*, troop-vessel, Master Com. Driver, arrived from Portsmouth.

In the Shannon—The *Fox*, 42, Capt. Sir H. M. Blackwood, Bart., with the following under his orders:—The *Lynx*, 3, brigantine, Lieut. Com. Nott, and steam-vessels *Hecate*, 6, Com. Bower, *Tartarus*, 2, Com. Wolf, *Comet*, *Dwarf*, 1, Lieut. Com. Chamberlain.

At Bantry Bay.—The *Cyclops*, 6, steam-vessel, Capt. Lapidge, *Flamer*, 6, Lieut. Com. Postle, and *Snipe*, 2, cutter, Lieut. Com. Raymond.

At Dublin—The *Volcano*, 2, steam-vessel, Com. C. J. Featherstone.

The *Rhadamanthus*, 2, steam troop-vessel, left Cork on the 18th, with a company of Royal Marines, for Duncannon.

The *St. Vincent*, 120, Capt. R. F. Rowley, with the flag of Admiral Sir C, Rowley; *Caledonia*, 120, Capt. A. Milne, with the flag of Adm. Sir D. Milne; and *Camperdown*, 104, Capt. W. F. Martin, with the flag of Vice-Adm. Sir J. C. White, the flag-ships at Portsmouth, Devonport, and Sheerness, are ordered to be got all a-taut, and will shortly leave their respective harbours, the *St. Vincent* for Spithead, the *Caledonia* for the Sound, and the *Camperdown* for the Nore, preparatory to their annual cruise, during the summer, to exercise their crews.

The Mediterranean Fleet.—*Malta*, Mar. 6th,—The *Queen* remains in port, notwithstanding the hurried preparations made last week for her cruise, which has, it seems, been put off *sine die*. Neither the *Formidable* nor the *Indus* have joined the flag-ship as yet, although the former is hourly expected. The latter is not to leave the Piræus till later in the season. H.M. steamer *Geyser*,

Com. E. J. Carpenter returned in port on Tuesday last from Gallipoli. She brought here the crews of two British merchant vessels, the Urchin and Talbot, lately wrecked, the former at Brindisi, and the latter near Cape Santa Maria di Leuce. The weather has been dreadfully severe in the Mediterranean. The damage done on the coast of Sicily has been immense. Many vessels were blown from their anchors in the Port of Trapani, and greatly injured.—Such a succession of terrific weather has never been experienced of late years. Com. Carpenter reports that the light stated in the charts at Gallipoli does not exist.

Commodore Purvis's Squadron.—The *Alfred*, 50, Commodore Purvis, was at Monte Video, on the 30th Dec., with the *Daphne*, 20, Capt. Onslow, and *Racer*, 16, Com. Reed.

The *Viper*, 6, brigantine, Lieut. Com. Carter, and *Ardent*, 3, steam-vessel, Com. J. Russell, left Monte Video on the 30th Dec. for Buenos Ayres.

The *Gorgon*, 6, steam-frigate, Capt. C. Hotham, was at Maldonado, engaged in looking after British property in that quarter, seized by order of General Oribe. It was believed, however, that despatches carried there by the *Ardent*, from Buenos Ayres, would lead to an amicable adjustment. The French Consul Pechin had demanded and received his passport.

The *Pearl*, 20, corvette, Capt. Stopford, (so long expected in England,) was still at Buenos Ayres on the 31st of January, and had at that date received no orders for the homeward passage, as not a ship could be spared from that station.

The Pacific.—By accounts from the Pacific we find that Rear Adm. Thomas the Commander-in- Chief, was at Oahu, on the 23rd December. The *Basilisk*, 6, ketch, Lieut. Com. Hunt, was sent to Tahiti. The *Hazard*, 16, sloop, Com. C. Bell, was at Mazatlan, and was expected to return to San Blas. The *Dublin*, 50, Capt. Tucker, was on her way to Ylo. The *Modeste*, 18, sloop, Com. T. Baillie, arrived at Callao on the 10th Dec., where she found the *Vindictive*, 50, Capt Nicolas, The *Salamander*, 4, steam-vessel, Com. Hamond, was on her way to Panama.

Coast of Africa.—The *Madagascar*, 44, Capt. J. Foote, was to leave Ascension for the Cape de Verd Islands early in February. The *Heroine*, 6, Lieut. Com. H. R. Foote, was to proceed to the southern coast of Africa. The *Star*, 10, sloop, Com. W. Dunlop, was cruising in quest of slavers in the Bight of Benin.

The *Philomel*, 6, survey-vessel, Com. B. J. Sullivan, was at the Falkland Islands, pursuing her surveying operations.

H.M.S. in the West Indies.—The *Illustrious*, 72, Capt. Erskine, with the flag of the Commander-in-chief Vice-Adm. Sir C. Adam, K.C.B., and the *Eurydice*, 26, Capt. G. Elliot, and *Spartan*, 26, Capt. Hon. G. G. J. B. Elliot, left Port Royal for a cruise on the 25th of January, and returned to that port on the 31st December.

The *Inconstant*, 36, Capt. C. Freemantle, arrived at Port Royal on the 30th of December from a cruise.

The *Ringdove*, 16, Com. W. Daniell, Knt. arrived at Port Royal on the 3rd ult. from Hayti. She left Port-au-Prince at 9 P.M. on the 31st of January, when affairs were very quiet. The French Admiral and squadron sailed from Port-au-Prince on the morning of that day. Two vessels were seen off Cape Donna Maria on the 1st of February, supposed to be the French Admiral's frigate and a small vessel.

The *Pickle*, 2, schooner, Lieut. Com. Bainbridge, left Port Royal on the 25th of January. She arrived at Falmouth on the 30th with specie for the troops, and would proceed to the coast of Cuba to cruise after slavers.

The *Fair Rosamond*, 2, schooner, Lieut, Com. Bullman, sailed from Port Royal on the 3rd ult. on a cruise.

The *Hermes*, 3, steam-vessel, Lieut. Com. W. Carr, having on board Major-General Berkeley, sailed from Port Royal on the 5th ult. for Lucea, whither that gallant officer proceeds on a tour of inspection.

The *Griffon*, 3, brigantine, Lieut. Com. Jenkin, sailed from Port Royal on the 25th December, for St. Juan.

The *Electra*, 18, Com. A. Darley, arrived at Barbados from Dominica in two days and a half.

The East Indies and China.—The *Spiteful*, 6, steam-frigate, was still at Bombay, in the hands of the shipwrights. The *Cornwallis*, 72, Capt. P. Richards, C.B., flag of Vice Adm. Sir W. Parker, G.C.B., and the *Dido*, 18, Capt. Hon. H. Keppel, were at Manilla on the 11th Nov. The Admiral was about to proceed to Singapore, on his way home; and the *Dido* was about to sail for Hong Kong. The *Alligator*, 26, Master Com. Brown was at Singapore on the 10th Dec. The *Rattlesnake*, troop-ship, Master Com. Sprent, left Bombay on the 28th Dec. for England. The *Clio*, 16, sloop, Com. Fitzjames, was in the Persian Gulf.

The squadron engaged in the suppression of the slave trade on the coast of Africa, and the Cape of Good Hope consists of 5 frigates, 14 sloops, and 6 steamers, altogether 25 vessels. The frigates are *Madagascar*, 44, Capt. J. Foote; *Cleopatra*, 26, Capt. C. Wyvill; *Isis*, 44, Capt. Sir J. Marshall; *Conway*, 26, Capt: R. Fair; and *Winchester*, 50, Capt. C. Eden, with the flag of Rear-Adm. the Hon. J. Percy. The sloops are *Espoir*, 10, Com. A. Morrell; *Alert*, 6, Com. C. J. Bosanquet; *Ferret*, 6, Com. J. Oak; *Hyacinth*, 18, Com. F. Scott; *Sealark*, 10, Com. T. L. Gooch; *Star*, 6, Com. R. J. W. Dunlop; *Bittern*, 16, Com. E. Peel; *Sappho*, 16, Com. the Hon. G. Hope; *Heroine*, 6, Lieut. Com. H. R. Foote; *Pantaloon*, 10, Lieut. Com. C. H. Lapidge; *Rapid*, 10, Lieut. Com. E. C. Earle; *Spy*, 3, Lieut. Com. S. Otway Wooldridge; *Arrow*, 6, Lieut. Col. W. Robinson; and *Prompt*, schooner, A. P. Arkwright, Mate, in command. The steamers are—*Hydra*, Com H. B. Young; *Thunderbolt*, Com. G. N. Brooks; *Wilberforce*, Lieut. Com. R. S. Moore; *Albert*, Lieut. Com. D. Woodruffe; and *Penelope*, Capt. W. Jones, on passage from England. In addition to the squadron immediately on the coast of Africa, there are many other vessels cruising for slavers on the South American coast, and which form part of the squadrons belonging to the West India and Brazilian stations.

Promotions and Appointments.

(From the Naval and Military Gazette.)

St. James' Palace, Mar. 13.—The Queen was pleased to confer the honour of Knighthood upon James Clark Ross, Esq., Captain in the Royal Navy.

Mar. 20.—The Queen was pleased to confer the honour of Knighthood upon William Bain, Esq., Master of the Royal Navy.

PROMOTIONS.

Captain—W. A. Willis.

Retired Captains—C. T. Thurston, C. Tyler, W. Style.

Commanders—C. J. Featherstone, R. W. Pelley, C. F. Schomberg, C. B. Hamilton,

Lieutenants—F. Robinson, G. M. Aldridge, H. G. Veitch, C. O. St. John Mildmay, J. W. Probert, P. W. Gibson, C. Rainer, J. H. Shairp, F. H. Short, F. J. Nicholson, T. Davies, C. M. Shipley, J. F. C. Hamilton.

Masters—T. C. Pullen, H. F. Collins, H. D. Burney.

APPOINTMENTS.

Captains—Sir C. Sullivan, Bart. 1814 to *Queen*—G. F. Rich (1823) to *Formidable*.

Commanders—E. W. Garrett (1809) to Greenwich Hospital—H. M. Denham to *Royal Sovereign*—W. H. Kitchen to *Devastation*—T. S. Brock (1842) to *Bonetta*.

Lieutenants—J. Cannon (1832), to *Queen*—F. H. Stanfell (1840) to *Warspite*—H. C. Otter (1831) to command, & T. Smith to *Sparrow*—J. W. Whyte (1843) to *Ringdove*—B. Young (1841) & G. Newcomen to *Agincourt*—W. Morris (1838),

R. Hoops to *Tortoise*— G. Marriott (1842) W. S. Pollard (1843) and F. Robinson to *Penelope*—A. La Touche (1840) to *Scylla*—J. B. Marsh (1830), C W. Lindsay (1837), F. H. Short (1843), T. Davis C. C. Denny to *America*—E. M. Leycester (1841) to *Orestes*—A. J. Woodley to *Gorgon*.

MASTERS—G. Giles to *Vixen*—F. F. F. Taylor to *Alert*—R. Allen to *Dido*—J. N. King to command *Rattlesnake*—R. Fuller to *Stromboli*—J. E. Elliott to *Agincourt*—J. Penn to *America*—J. Read and W Pickering to Greenwich Hospital—J. Jeffry to *Sparrow*—J. Stokes to *Bonetta*.

MATES—C. H. Young to *Prometheus*—J J. Carmichael and W. F. Farrant to *Excellent*—H. Bainbridge to *St. Vincent*—G. K. E. Wright and H. Bainbridge to *Caledonia*—E. Hempsted and C. Fellows to *America*.

SURGEONS—Bower to charge of *Cadet* Convict ship,—G. Burn to *America*.

SECOND MASTERS—A. O. West to *Lucifer*—J. F. Beckett and F. Taylor to *America*—W. Turton to *Prometheus*—A. J. Sauwell to *Tartarus*—J. Imrie to *Rhadamanthus*—F. Macbean to *Tortoise*—G. A. Forster to *Lightning*—T. Bowen to *Royal Sovereign* yacht.

ASSISTANT SURGEONS—J. Speer to *Caledonia*—J. D. Hooker to *William and Mary*—D. D. A. Newman to *Lucifer*—R. Tilston to Haslar Hospital—J. Gordon to *Penelope*—J. M'Craith to *Bonetta*—

MIDSHIPMEN—J. Maitland to *Lucifer*—W. B. Harris to *America*—G. Erskine to *Flamer*.

NAVAL CADETS—W. Woolcombe, H. W. Wilson, W. F. Tollamache, Hon. H. W. Chetwynd to *Camperdown*—Hon. D. Ward, T. C. Smith, H. F. May, H. B. Jackson, F. S. Dallison, & H. G. Glynn to *America*.

PAYMASTERS AND PURSERS—B. Wickham to *Tortoise* as storekeeper at Ascension—J. Taylor to *America*—J. E. Dring to *Larne*.

CLERKS—A. N. Tweddle to *Sparrow*—A. Gilbert to *Bonetta*—J. Winstanley to *Victoria and Albert*—J. Bell to *Lucifer*—J. Roberts and J. T. Jennings (add.) to *America*.

SECRETARY'S CLERKS—W. G. Young to Admiral Sir C. Rowley; J. Timpson to Rear Admiral Bowles.

COAST GUARD.

Lieut. C. W. Poynter, to command *Sylvia*.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

At Lewisham, Mar. 3, the lady of W. R. Montmorency, Esq.

Marriages.

At Hampstead, Mar. 2, Com. W. Cottesnorth, R.N., to Susan Maria, daughter of the late W. Greaves, Esq.

At Falmouth, Feb. 29, Mr. T. Bowen, R.N., to Jane daughter of the late Com. Pascoe.

At Stonehouse, Mar. 2, Lieut. J. Polkinghorne, R.M., to Miss Wiggins of Stonehouse.

At Valetta, Feb. 27, Com. E. Ommaney, R.N., to Amelia, daughter of S. Smith, Esq, of H.M. Dockyards, Malta.

At Pau, Feb. 19, Com. the Hon. B. Cary, R.N., to Selina, daughter of the late Rev. F. Fox, Longford, Ireland.

At Jersey, Feb. 20, Capt. J. Abbott, R.N., to Mary Ellis, daughter of Capt. J. A. Stevens, R.N.

Deaths.

In Canada, Jan. 22d, Capt. W. Bourchier, R.N., and Jan. 15, Agnes Mary, his daughter, aged three years, both of scarlet fever.

At Surbiton, Feb. 12, Lieut. F. Brodie, R.N., aged 55.

At Exeter, T. Jackson, Esq., Surgeon R.N.

At Plymouth, Feb. 27, Retired Com. N. C. White.

At Plymouth, Feb. 27, J. Clyde, Esq. Paymaster and Purser R.N.

At the Royal Naval Hospital, Stonehouse, Mrs. Proctor, wife of G. Proctor, Esq., Surgeon of that establishment.

At Lerwick, Mr. G. Duncan, Purser R.N.

Mar. 6, Anna Maria, daughter of Lieut. E. B. Davison, R.N.

At Merioneth, P. W. Thurston, Esq., son of Capt. Thurston, R.N.

At Anglesey Hunt, Mar. 1st, J. M. Waugh, Esq., Commander R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st of February, to the 20th March, 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	W.	29·50	29·27	33	39	27	41	S	SE	2	2	os 2)	ors (4
22	Th.	29·24	29·42	32	33	32	34	NE	NE	6	4	qos (1)(2)	o
23	F.	29·76	29·61	28	37	23	46	S	S	3	6	b	oesr (4)
24	S.	29·05	29·30	37	40	36	43	NW	N	5	5	qbcr (1)	qo
25	Su.	29·51	29·25	40	48	33	49	SW	SW	3	7	or (1)	qor 3) (4
26	M.	28·75	28·65	43	44	38	47	SW	NW	6	6	qbcprh 2)	qbcpsr (4)
27	Tu.	29·38	29·43	29	35	27	37	N	NW	5	4	b	bcm
28	W.	29·60	29·63	36	43	32	45	NW	W	4	4	b	bcr (4
29	Th.	29·56	29·60	37	47	32	48	SW	SW	3	3	b	bcr 4)
1	F.	29·34	29·50	45	52	43	53	SW	W	3	3	bc	bc
2	S.	29·44	29·43	40	48	37	49	SW	SW	7	7	bcgrh (1	qpcp 3)
3	Su.	29·35	29·47	40	46	35	47	W	W	7	8	qbcp (1)	qbcp 3)
4	M.	29·35	29·22	39	37	36	39	NE	N	3	4	or (2)	or (3)
5	Tu.	29·76	29·78	34	37	32	38	NW	NW	3	2	o	ops 3)
6	W.	29·71	29·77	27	38	23	39	N	NE	2	4	bm	bc
7	Th.	30·05	30·12	35	40	31	41	N	N	3	3	bc	o
8	F.	30·25	30·25	33	43	29	43	E	S	2	2	bc	o
9	S.	29·99	29·94	43	54	35	55	SW	SW	6	6	qo	qbc
10	Su.	29·62	29·74	42	41	36	43	NE	N	4	5	or (2)	bc
11	M.	29·60	29·39	47	52	33	53	SW	W	9	9	qor (1)	qo
12	Tu.	29·50	29·48	38	42	33	43	NW	NW	10	10	qprhs 2)	qprhs (3
13	W.	29·92	29·94	37	42	32	43	NW	NW	4	6	bcm	qbcm
14	Th.	29·87	29·78	36	42	31	43	S	E	2	2	or 2)	or 4)
15	F.	29·45	29·49	43	47	39	48	SW	SW	4	4	or (1)	bc
16	S.	29·45	29·56	44	50	36	52	SE	E	3	3	bc	bc
17	Su.	29·87	29·92	39	39	38	41	E	NE	6	6	qo	qo
18	M.	29·98	30·01	35	44	31	45	NE	NE	5	5	qbc	qbc
19	T.	30·06	30·00	38	43	35	47	NW	NW	2	2	o	o
20	W.	29·58	29·46	43	40	39	49	W	N	8	6	qo	qbcp (3

February 1844. —Mean height of the Barometer=29·592 inches; Mean temperature = 35·5 degrees; depth of rain and snow melted fallen 2·89 inches.

Errata:—In the January number, p. 64, Barometer on November 29th and 30th, for "33·28 and 33·36" read "30·28 and 30·36."

TO OUR FRIENDS AND CORRESPONDENTS.

The article on flogging Merchant Seamen, in reply to P.P. received too late for our present, shall appear in our next number.

Mr. Knight.—*Early* in the month.

Our *Naval Movements* will in future be continued as in our present number, as *Naval Intelligence.*

Hunt, Printer, Carlisle Street, Maida Hill.

The Reefs and Wrecks of Isle Rodriguez.

We all of us know, (and seamen do to their cost,) that there are rocks and shoals enough in the ocean;—but there are some persons who would have more. One party for instance (and that a tolerably numerous one,) would place a solitary danger to the north-west of Ireland, to bring up ships bound to Liverpool; and this they dubbed Aitkins rock. This same rock kept its place on the charts, remaining as a kind of bugaboo to the Liverpool trade until it was fairly dislodged by the perseverance and energy of Captain Vidal, R.N., who in the Onyx and Leveret dissolved the rock into drift timber and fallen trees! and Aitkins rock (to which the losses of many vessels had been attributed) was no more.* Another of the same genus started up in the middle of the Providence north-east channel some years ago, and was duly recorded† as the Lorton rock, because the Lorton, a British brig, was lost upon it. This, indeed, was but a short-lived danger, for a very few months afterwards, some iron pipes, which the Lorton had in her as ballast, were found by Captain R. Owen‡, not in the middle of the channel, but on Egg Island reef, on the southern edge of it. Accordingly this danger disappeared. Another rock of the same kind has been conjured up to the north-east of Bonavista, of the Cape de Verde Islands, one which has in a remarkably accommodating manner adapted itself in size and position, and even in the important particular of depth of water over it, quite to the taste of its latest discoverer. Like Captain Warner's invention, this too has been "blown out of the water"§, and lodged on the outer reefs of the island of Bonavista, which in consequence can boast of the various names of Hartwell, Madeline, Bonetta, Charlotte, Phœnix, or the more euphonious one of Bom Felix of antiquity, and many others among which even the most fastidious hydrographic taste might select one for adoption. But what does all this answer, this wholesale making of rocks? The answer is obvious, it answers, the charts‖ take the blame. With the uninitiated it passes current and answers the intended purpose; it is one thing to say that a rock exists in a certain place, and it is quite another thing to answer that it does not.

A precisely similar case to the foregoing has just presented itself in two wrecks which have occurred lately off the Island of Rodriguez, in the Indian Ocean. Two British Indiamen the Queen Victoria¶ of 715

* In the Geographical Journal for 1831, (Murray,) will be found at p. 51, Capt. Vidal's account of his examination, and a reduced chart of his tracks with the names of all these vessels.

† Naut. Mag. 1832, p. 56, see Commander's letter.

‡ Naut. Mag, 1834, p. 131,

§ Vide Sir R. Peel's speech, Naut. Mag. 1842, p. 639.

‖ "*The Charts*," is a kind of general name, under which are included, of course, all those published, all being supposed alike; whereas the very reverse is the fact, each (more especially in foreign navigation,) differing in many particulars from the others. But the Admiralty charts, which in parts, like all others are imperfect from want of surveys, must be included by inference, and being pronounced wrong, is a sufficient reason for all others being so, and sufficient also to account for the loss of a ship.

¶ Of Liverpool.

tons, and the Oxford of 621 tons, have been recently lost on the reefs surrounding that island; and what has been the consequence? As usual the charts are in fault,—no blame can possibly lay with their commanders, while the charts supply erroneous information; therefore, all charts are declared bad alike, but those of the Admiralty are prominently set forth as laying down the reefs "five miles from the island" when they are "fifteen." This indeed was a formidable charge. Incorrect charts are well able of themselves to account for losing ships, and it is easier to say that they are wrong than to prove they are not so. The accusation stands in p. 60, of our January number, in all the imposing attitude of truth, and in our innocence of its real character, we alluded to it in our February number, p. 108, cautioning our traders to beware of the new danger! This will assuredly relieve us from the charge of apathy respecting the safety of our fleets of merchant shipping daily traversing the ocean,—a charge which it would be difficult to support against the *Nautical*.

Now, Rodriguez happens to occupy an important maritime position. It lies in the very high road followed by ships home and out to India, serving as a kind of sign post by which the behaviour of a chronometer is ascertained, the reckoning checked, and a new departure taken as a fresh start in the race of the voyage. Like Bonavista of the Cape Verds, it forms a kind of elbow or projecting point, the sight of which is hailed with satisfaction after occasioning, perhaps, many a wearied look out for it. And in this proper light it was considered by Capt. Sir John Marshall, in command of H.M.S. *Isis*, who, as we stated in our February number, left the Mauritius for the scene of wreck to survey the reefs, to correct the imperfect charts, and to afford that assistance to the unfortunate sufferers, which is so welcome in distress, besides giving that protection to property which in his official capacity can be afforded by the captain of a man-of-war.

The information respecting the position of any maritime danger given in a protest being important to seamen as assigning the position of it, the following extract from that of the Queen Victoria, the first of these ships, might, therefore, be of service to them:—

"Sailed from Liverpool with cotton and sundries, on the 3rd of April, the barometer fell, weather looking bad; on the 4th close reefed top-sails, on the 5th weather more moderate, wind ranging from north to north-west with heavy swell from south-west, made all sail at noon; on the 6th, lat. obs. 18° 41′ S., long. 64° 35′ E., a fresh gale at N.b.E., with dark weather and heavy swell from northward; at 6 P.M. weather more threatening, shortened sail, Rodriguez bore at noon by account south-west by compass 90 miles, and at 4 P.M. S.W. ½ W. by compass 58 miles, having steered since noon south-west; at 4h. altered course to S.W.b.S. ½ S., when at half-past 12 A.M. breakers were seen on starboard bow, hauled the ship to the wind on larboard tack and braced up; the ship struck on a rock, which tore off the rudder, drove immediately on the reefs, morning terrifically dark; cut away main and mizen masts in the hope of her driving over the reefs. On the 7th at daylight found the ship upon a reef, from 13 to 15 miles off the south-west point of Rodriguez, ship fast breaking up, boats stove and washed away, as were rafts. The chief mate, three seamen, and a passenger were drowned, being washed from off the bowsprit, when over the side; the rest of the crew were saved by clinging to broken pieces of wreck, bales of cotton, &c., and were washed over the reef into smooth water, where canoes received them and conveyed them to land: remained there 36 days, and

were removed to Bourbon by the Colibre, French brig-of-war, Capt. Oriel, and sent to the Mauritius."

The following additional testimony of the position of the reef having also its value is equally entitled to be recorded.

"Declaration of the inhabitants of the Island of Rodriguez.—Messrs. Marin and Chelin, and other principal persons, inhabitants of Rodriguez, declare that the ship Queen Victoria was wrecked on a reef extending 15 miles to the best of their belief, from the south-west end of Rodriguez; they confirm Captain Black's statement, and add the sea was making a full breach over her, and full ten feet above any part of the wreck, and twenty persons were saved.

(Signed) "J. Marin,

"*Rodriguez, April* 15, 1843. "C. Chelin."

The foregoing will inform our readers of the position of the reef, according to the statement of the Commander of the Queen Victoria, confirmed by the opinions, "*to the best of their belief*," of the principal inhabitants of the island; and who could have better opportunities than they had, for forming those opinions,—better than the said inhabitants, or the natives in the canoes, which conveyed from the reef to the shore, the unfortunate survivors of the wreck? Really, considering the amount of correct hydrographic information to be found in protests of this description (especially when supported by such incontrovertible authority as the foregoing, by no less than that of the inhabitants of the place where the wreck occurs,) it is some matter of surprise that the Shipwreck Committee should not have recommended the publication of them in all cases where such valuable information may be gleaned, as being of so much service to navigation.

Leaving this, however, for the consideration of the Committee,* we will proceed to record an extract from the protest of the Oxford which no doubt will confirm the statement in the preceding documents, if it should not afford conclusive evidence of correctness in the position assigned to the reef off Rodriguez.

"August 31st, 1843.—The ship Oxford of 621 tons, worth £150,000 to £200,000, lat. at noon 20° 4′ S., long. about 120 miles W. ½ S., from Rodriguez, sailing 8 or 9 knots, steering W.b.S. At 4 A.M. on the 1st of September, saw the land at north-west true, no moon, distant about 19 or 20 miles, continued on a W.b.S. course; no studding-sails set, having taken them in at midnight; about 5 A.M. breakers seen on the lee quarter, the ship immediately struck aft, hauled up to S.b.E. and braced up; breakers seen then ahead, ship not having made more than a quarter of a mile from first striking; struck heavily forward, fore-top-mast went over the side, the ship paid off broadside to the reef, and fell over to starboard; cut away fore and main-mast to prevent her falling on her beam ends; sea breaking over the ship, men could only stand on the deck in a few places.

"Daylight found the ship on the south-west reef of Rodriguez, 14 or 15 miles from the island, got the launch out on the port or weather side, she filled and broke adrift; starboard cutter was stove in pieces by mizen-mast-head, the only available boat on the larboard quarter, in which I intended to land, Lieut. Allerdyce, wife, two children, and one native female servant were put into her with a crew. About 10 or 11 A.M. the boat was lowered, and got safely over the reef into smooth water, in seven or eight minutes, where canoes were in readiness to receive them. The boat could not return to the ship, the crew then

* Why should not a protest on account of wreck be examined before some tribunal. Surely underwriters would find a just decision to *their* advantage?

began to leave the wreck on spars and hencoops; they all got safe over the reef. Myself, the chief mate, and boatswain, with two or three seamen remained on the wreck all the night of the 1st, until 3 P.M. on the 2nd, when the ship breaking up rapidly we made a raft, and drifted in safety over the reef. Did not save an article of any kind, not even the log-book.

"After leaving the wreck the crew were received on the island by Captain Chelin, and treated during our stay with the greatest hospitality. The only portion of cargo saved from the wreck, was a few pieces of silk; piece goods 396 were saved by Captain Marin, and a small quantity by Captain Chelin, one-third of the same being given up for salvage. 423 pieces were left on the island, to be forwarded to the Mauritius by the first vessel that arrived.

"I consider that a great portion of the cargo must have washed ashore, but was taken away by the black inhabitants, and conveyed to the mountains.* I think cargo to a considerable amount might have been saved, had there been any person invested with the power of a magistrate which is much required in the island, the Blacks doing just as they please. Captain Chelin and Marin are the two principal persons on the island, the latter having purchased the wreck of the Oxford for the sum of 360 dollars. I was told by the above named persons they did not expect to get anything done by the Blacks for six months to come, as it was their opinion a great deal of rum had been conveyed to the mountains, or buried in the sand. Captain Marin having the launch of the late ship Queen Victoria, he kindly offered it for the use of myself and my crew, and on the 23rd September we embarked in her and got safely on board the ship John Renwick, Captain Marin being with us to take his boat back, the late second officer and three seamen were left on the island, they not being forth-coming when I and the rest of my crew and passengers embarked in the launch. I cannot explain their motives for staying behind with the exception of one man who might be induced to remain on the island to evade the punishment he so justly merits, namely, by striking me two or three times when on the wreck, in the presence of the chief and 3rd officers, for endeavouring to prevent him from taking too much brandy, a little of which was in the larboard awning cabin; the same individual struck me again, and gave me a black eye on the evening of the 9th September, whilst sitting at dinner in company with the above named officers, and Lieut. Allerdyce and his lady."

"*Port Louis.* (Signed) "THOMAS MARSHALL."

The above accounts agree tolerably in assigning to the reef a position distant from thirteen to fifteen miles from the south-west end of Rodriguez. And that position it would have taken on the charts but for the timely investigation of Captain Sir John Marshall, the result of which is stated in the following letter received from him. On such authority therefore and with the triangulation of the officers of the *Isis* before us, on which we see the position of the remains of the Oxford within three miles of the island, relieving our minds from all suspicion of there being any detached reef, we may assure seamen, that they need not trouble themselves, or entertain the least anxiety, about reefs fifteen miles south-west of Rodriguez; and that the old plan of D'Apres, one of the Admiralty charts, in which "they are laid down and described as only five miles" from the island, is after all tolerably correct!

"*H.M.S. Isis, Port Louis,* 11*th Nov.* 1843.

"Two British merchant ships of considerable tonnage, the Queen Victoria and the Oxford, having been wrecked on the coral reefs off the south side of the island of Rodriguez, within the last seven months; and the masters of these vessels, with their officers and crews, having in their protests declared on oath,

* We understand much of this was given up to Sir John Marshall, and conveyed by the *Isis* to the Mauritius.

that the said reefs extend from 13 to 15 miles from the island, whilst hydrographical authorities confine their limits within 5 or 6 miles.

"This difference in their positions, if correct, would subject our commercial marine to considerable danger, particularly as a large number of ships sight Rodriguez on their way from India to the Mauritius and England.

"I considered the subject of sufficient importance to submit to His Excellency Sir William Gomm, the expediency of my proceeding there in H.M. ship under my command, for the purpose of ascertaining the actual position of these reefs; and accordingly proceeded from Port Louis on the 12th of October, and arrived at Rodriguez on the 19th; where, assisted by my officers, I carefully examined the reefs, extending from Flat island on the south side of Rodriguez, round the west end to Booby island on its north side, and *in no part does the reef extend beyond 5 or 6 miles.*

"Ships are recommended to pass to leeward of the island, giving the north-west part of the reef a good berth.

(Signed) "J. Marshall, *Captain.*"

The Report of the Committee on Shipwreck.

There is a great mass of valuable information contained in the Report of 1836, and that of 1843, which has recently appeared; but, it is quite impossible from the contradictory opinions given by the different persons examined, to form a satisfactory analysis of the contents of the two huge folios which have been published.

It is, indeed, curious to observe what a bias the profession, calling, or occupation of the individual appears to have upon his opinions, inferences, and conclusions. Self-interest has so powerful an influence over the mind as often to warp the judgment, and from which obstacles are thrown in the way, unwittingly, of its furtherance; and where this does not act, there is found that dogged John Bullism, so peculiar in Englishmen, of opposing a proposed measure, however likely it may be to become beneficial, merely from the spirit of obstinacy, or from vague or uncertain notions of the liberty of the subject being invaded.

The shipowner fancies that a government measure to compel the masters of ships to undergo an examination touching their professional qualifications, would be an undue interference of his (the shipowner's) privileges, when the exercise of common sense would clearly show that it would not have such an effect. Then we have the scientific navigator, from that high degree of security which such acquirements bring to its possessor when traversing the ocean, or sailing in narrow seas, and upon dangerous coasts, insisting, without any modification, on a full and rigid examination of all masters and mates. With this opinion, which appears more reasonable, indeed, than that of the shipowner, contrast the impression of the old skipper. He has no idea, otherwise, than that master-mariners are quite competent to their trusts, although it is notorious that many are not, from a variety of causes. Others, again, who are, and who are not, mercantile men, judging from their own observations and experience, from what they have heard, and seen, think that an examination is called for.

Various are the opinions given of the causes of shipwreck. Some pronounce that intemperance generally leads to it, others, that the insufficiency of the ships is the main cause; want of the qualifications of sea-

manship, of navigation, of good look out, of due caution, of attention to the lead, disregard of the local attraction, &c. are advanced.

The broad question would, perhaps, be difficult to be answered even from the evidence; and the contradictory opinions of individuals, all professed to be drawn from facts which passed before them, or from inferences deduced from circumstances, make it impossible to simplify the conclusion so as to bring it to bear singly upon the point of incompetency from a want of perfection or efficiency in the art and science of navigation. If we were to insist upon that abstract question as being the one simply to lead to a correct answer, we should be led astray. A want of knowledge in the higher branches of navigation is one only of the many causes which lead to the loss of vessels; nor would it, taken solely as a qualification be a guarantee of safety; for although unquestionably it is of the first consideration, there are many other things absolutely necessary in aid of the protection of life and property upon the ocean.

It was an old saying, that the Jamaica ships had been so long used to the route by the Gulf stream that, like the horse to his stable, they knew their way home. This inuendo is upon a par with that of the American skipper who dropped a shingle every day, in order to find his way back. A man may have talent enough to become a good seaman, with just sufficient knowledge of navigation to conduct his ship from one port of the Atlantic to another, as it is said some have done for thirty years by dead reckoning alone. But this is no argument against the propriety of the master acquiring a practical knowledge of the higher branches of navigation. But other qualifications are necessary to form an efficient commander, the want of which would render his proficiency in navigation of little avail to the safety of the ship; the most expert mathematician if intemperate, careless, over-confident, deficient in presence of mind, or distrustful of his own judgment, would be but an indifferent captain of a ship.

It is no doubt true, that an examination would not elicit all these minute points, for the reason that at home men conduct themselves often in a different manner to what they do when upon the free ocean, under no moral control but their own. Yet one great point would be gained, and that is certainly next to, or co-equal with sobriety: you would be sure that the master who has passed an examination would know how to navigate the ship committed to his care; for, if the examiners are competent to the task, and do their duty strictly and impartially, all the "cramming," as it is called, would not carry a man through the ordeal; a little cross-questioning, and a problem or two not contained in their old friend John Hamilton Moore, or any other work of the sort, would soon settle the business, *malgré* the largest shipowner's opinion of instructing a boy in twenty-four hours sufficiently to enable him to pass.

As suggested, practical observations should be taken and worked.

But, supposing it possible that a few were possessed of such retentive memories as to be able to "cram" their minds full, for no ordinary intellect could accomplish the feat,—among young masters and mates. Would not a little longer application serve to make them efficient in reality? At all events, if a few did accomplish such a *ruse*, in the

way the Nautical shipowner suggested, they would have advanced beyond the Rubicon, and be verily in possession of the rules; and it is scarcely questionable but that they would proceed and perfect themselves practically in a short time, or they would be very simple fellows to stand in their own light.

The objection of the shipowner does appear a very lame one. Take the general and abstract question,—is a man who has passed, and obtained a certificate of qualification, in any department, to be preferred to one who has not, and whose accomplishment is from hearsay, or taken upon trust? But, let us look to the contingencies. What are these as an objection? a fallacy, because they are not imperative, and could be obviated though they carried a difficulty with them. In the first place the enactment would be prospective, and consequently, there would be, for years to come, the "old stock," which the ship-owner is so attached to, ready for employment; besides, the "young stock" would be accumulating, and having the proof of efficiency in their hands, thus relieving the shipowner from the trouble of enquiry on that score.

Secondly: this efficiency could not possibly interfere with the free exercise of selection. It could not in the slightest degree prevent the shipowner from choosing whom he pleased to command his ship. In ordinary cases, at present, the shipowner appoints a captain to his ship from the recommendation he receives of his competency from some individual interested in the welfare of the latter; or he may accept him, as a matter of course, upon the presumption of his being duly qualified from having commanded vessels for some time, and performed the voyages safely. But he can have no positive proof of his captain's proficiency beyond what he may have gleaned from others, or what may arise from the fact of his success in safely navigating the vessels he had commanded. These may be deemed sufficient in the estimation of the owner; but he may, as some have been, deceived; for it is no proof of a man's perfection as a navigator to have carried his ship in safety from one port to another, across the Atlantic, for many years. He may have been fortunate enough to have accomplished such voyages with his dead reckoning alone, as many have done; but that would not constitute him nevertheless efficient; skilful as he may be as a practical seaman with good judgment, would it bring to the owner the surety that a certificate of qualification would? Prejudice, or jealousy of interference may say it would, at least to satisfy the owner's mind; but that is not all that is required, the lives of others are to be protected, and mere opinion will not ensure that—this is the common sense of the matter. With respect to the interference of the legislature in concerns that are considered purely private as this is said to be, I think there is some misconception in the minds of the shipowners. If ships could be navigated without seamen, or the master's life alone was at stake, the case perhaps might be such as not to demand interference. But independent of the crew, a ship often carries one or two hundred passengers whose safety depends materially upon the captain's efficiency; and as instances are continually occurring of loss of life from want of competency, surely it becomes the duty of the governing power to enact laws to prevent or lessen such calamities as much as possible; and the only point which it could insist upon without infringing too closely upon private will, is

that which relates to the qualification of the masters. Such could not be considered a hardship, the members of other professions and trades are bound to pass an examination for the public good.—Why not the captain of a merchant ship? What is there in his particular situation that should exempt him from such an ordeal? It is presumable that, when a man presents himself to the owners of a ship as a candidate for command, that, he goes with the confidence of one who is qualified for the task.

If, therefore, he is concious of being so, and the owner believes that he is, what is to prevent his undergoing the examination which in every respect is to benefit himself and his employer? We may safely conclude that none but those who are really deficient would find objections; and as it would be obviously to the interest of every shipowner in the kingdom to be provided with masters who are, without doubt, qualified as efficient navigators, to what are we to attribute the stand which many of them have made against the measure? They best can answer truly. The reason given we have shewn to be a fallacy. We cannot determine.

If the captain of a ship dies abroad, should it be desirable, let there be a clause to admit the mate, or other person who may not have passed, to bring the ship home if such be the wish of the consignee. It is said that there are other duties to be learned by the mates besides navigation,—the routine of mercantile ship brokerage, docking, customs business, the classification of ship's papers, international treaties, &c.—What have these duties to do with the examination for navigation? At present I believe there is no small hand-book to instruct the mates in these essential duties.

Mr. Pope's huge volume would be a tax even to the masters. The mates catch the information by snatches, and probably very imperfectly; their passing would not disqualify them for receiving such information.

A few of the answers will serve to shew how widely men differ in opinion on the same subject, and how difficult it would be to legislate from such conflicting testimony as is contained in the Minutes of Evidence for 1843.

Ans. 1. "I think the principal cause of the losses of British ships has been the neglect or incompetency of those in command of them. It is very rarely that any vessel is lost except in consequence of neglect or mismanagement. In saying neglect, I mean not attending sufficiently to the position of the ship, to heaving the lead, to taking all those precautions, in short, which ought to be taken by a good seaman anxious for the safety of his ship, and knowing how to take care of her; and incompetency from not knowing how to make proper observations for ascertaining the ship's place, and not being practical seamen acquainted with their duty, having had sufficient experience either as masters or mates of merchant ships to entitle them to take under their charge, not only the ship and cargo, but the lives of all who are embarked on board, and to navigate from one part of the world to another. This I consider to be the principal cause of the loss of ships; for my opinion is decidedly, that ships which are not struck by lightning, nor disabled by fire, nor by any casualty which it is not within man's

power to control, are lost upon known coasts by the mismanagement of those in command of them. A ship may be lost in a foreign country from there being no charts, from the coast not being surveyed, or from the winds and tides, and so forth, not being well known; but on coasts which are well known, where every possible danger is pointed out by charts and by directions, I think that no ship can be lost except in consequence of want of precaution, want of foresight, or want of good management on the part of those on board of her.

"I think that a neglect of the use of the barometer has led to the loss of many ships: from a want of attention to the barometer, they have either closed the land (if at sea), or have put to sea (being in harbour in safety) at improper times; and in consequence of such want of precaution the ships have been lost, owing to bad weather coming on suddenly, which might have been saved had proper attention been paid to that very simple instrument. * * * * I think that, generally speaking, the masters of our merchant ships are very deficient in the qualifications necessary to be attained by those who make long voyages, as compared with the masters of foreign ships, the Americans, the French, the Hamburghers, and Baltic ships particularly, &c. * * * * I can understand a man-of-war in chase on a lee shore being led into a position from which she cannot escape, and being lost in consequence; but I cannot understand how a merchant ship, commanded by a prudent man, who attends properly to the instruments that he ought to provide himself with, can get into unavoidable danger on a well known coast, without mismanagement."

It will no doubt be admitted that this opinion is clear, distinct, and comprehensive; and contains in a few words the governing causes of shipwrecks. It shows that where circumstances are not beyond the power of a commander to control, there should be no loss—a self-evident proposition that it would be difficult to controvert. The details in proof are to be found throughout the examination of the different individuals whose evidence has been given. But I would observe that masters of ships are often placed in situations which lead to the hazard of losing their ships from the want of the necessary instruments. This can hardly be laid to their charge as a neglect; many who are efficient are without the means for providing themselves with all the requisite instruments for insuring safety, and are, therefore, subject to the same disasters as those who are incapable of using the instruments though provided with them. The master who navigates his vessel solely by dead reckoning, on account of the success which has attended him in making his voyages from one place to another, may fancy that chronometers can be dispensed with, and that lunar and sidereal observations are not absolutely necessary; although the occurrences of every year, were he not blinded by his good fortune, would present disasters enough to convince him of the contrary. There is no doubt that in some cases, where he prides himself on his skill and care in keeping his reckoning, he is indebted to the effects of the very cause which often leads to shipwreck—the currents of the ocean. In a long run these frequently balance each other.

As it ought to be the interest of the shipowner to use every means for the preservation of his vessel, and considering that he is more capable

of furnishing the requisite instruments for that purpose than the individual he employs; we think he ought to supply the master with a marine barometer, and one chronometer, the latter providing another, and the rest of the instruments required.

To the question (158)—"Is it your opinion that many vessels are lost in consequence of ignorance of seamanship on the part of the master commanding them, or mates succeeding as commanders?"

"Yes, I am of that opinion; I have heard it remarked that three out of every five ships may be considered as lost through the ignorance of masters and mates". The implication here is, that ships are lost from ignorance of good seamanship, which, however, we really believe to be the least operating cause.

We may state here that upon the general question the Committee of 1836 came to the following conclusion as to the causes of shipwrecks, viz:—

1 Defective construction of ships.
2 Inadequate equipment.
3 Imperfect state of repair.
4 Improper or excessive loading.
5 Inappropriateness of form.
6 Incompetency of the masters and officers.
7 Drunkenness of officers and men.
8 Operation of Marine Insurance.
9 Want of harbours of refuge.
10 Imperfection of charts.

To which may be added the following, as causes also of foundering, or the abandonment of vessels at sea:—

Causes.	*Remarks.*
11 Wilful scuttling, running on shoals, &c.	11 This has been proved, and the recent instances may be in the recollection of the reader.
12 Hurricanes.	12 There is little doubt but hundreds of vessels have foundered in hurricanes; ships well found, well officered, and well manned, such as men of war and East India Company's ships have disappeared in these storms.
13 Defective compasses.	13 A recent instance occurred to a vessel from the coast of Africa; her compasses were defective, (one in particular,) coming into the Channel; after sighting Scilly light, she shaped a course up for the Downs, but found herself at night off the Caskets!
14 Neglect of the lead.	14 Proofs have been recorded.
15 Bad look out.	15 This is very general, and is unpardonable.
16 Dense fog for several days.	
17 Mistaking lights.	
18 Spontaneous ignition.	18 We have known this occur in a man-of-war at sea: coal had been shipped at Halifax for the ship's use, it got wet and ignited. It appears to have been a particular sort found in some part of Nova Scotia, and brought to the port. The squadron was prohibited from receiving it afterwards. It is probable the steamers are aware of the fact.
19 Short-handed.	19 Shipowners may plead low freights as an excuse, but they are morally responsible for the ill effects

that may arise from sending their ships on long voyages short-handed, besides the injustice towards the employed.

20 Fire through negligence.

21 Errors in Nautical Tables.

22 Dead reckoning. 22 We have known a frigate (with chronometer) in three or four weeks' run, 900 miles out in the dead reckoning; and the same is reported of a merchant vessel.

23 Neglecting the variation of the compass.

24 Deck loads.

25 Ice-bergs and embayment in ice. 25 In dense fog off the Banks of Newfoundland we have known merchant vessels run with a brisk gale under as much sail as they could carry, without a look-out man on the fore-yard; and we have heard of some narrow escapes from ice-bergs, even to the rubbing of a ship's side against the huge glacial danger, when she was speeding at the rate of seven knots! There is little doubt of many missing vessels having foundered from coming in contact with these floating masses.

26 Collisions.

27 Neglect of tide.

28 Defective anchors and cables.

29 Mistaking the land. 29 A brig last year made the S.W. coast of Ireland, and mistook it for the coast of Cornwall, she beat about for several days before she discovered her error. A West Indiaman in entering the Bristol Channel during a fog, mistook Hartland Head for Lundy, and, but for the mate's sharp eye, would soon have been embayed in Barnstaple Bay. A red-coloured building is required on the Head, that it may be easily distinguished.

30 Bad pilot.

31 Pirates.

32 Upsetting in squalls. 32 The philosophy of squalls is not sufficiently studied among seamen; and to save a little trouble in reducing sail, ships often lose their spars, or are upset; and we have heard an experienced seaman ridicule the idea that any cloud is the source of wind; yet, we have no doubt he has often watched one, anxiously expecting a puff to proceed from it. The arched squall generally relieves the mind from anxiety, but, we have known these give out a blast, in passing, equal to the effect of carrying away the light sails, and top-gallant-masts. We should have less suspicion of the divided squall; but none of them are to be trusted at all times. The White Squall, as all tropical seamen know, is the most to be apprehended, as giving little warning; but, unquestionably, the disasters that often occur, may be laid down to the want of precaution; or, from erroneous judgment rather than from want of seamanship.

33 By lightning. 33 The idea which had long been entertained that, comparatively, few ships were struck by the electric fluid, has completely been set aside by the indefatigable research and unwearied industry of Mr. Snow Harris; and whether it be the province of the legislature or not to deal generally with the question of lightning conductors being applied to all vessels, it appears imperative upon it to insist that at least those ships which carry inflammable cargoes, such as cotton for instance, shall be provided with the instrument.

34 From the effects of disease among the crew. 34 In all tropical voyages European seamen are liable to enervating diseases, and instances are on record of very distressing scenes having oc-

curred from their effects. Very recently a case of this sort, in a ship from the East Indies, happened upon our own coast. All ships carrying passengers, or making voyages of from one to three years' duration, should be bound to have a surgeon on board.

35 Mutiny—Oriental crews.

35 It is remarkable that, although many instances of mutiny and murder have occurred to ships having Malays and other Oriental navigators on board, yet, little or no care is taken to guard against the treachery of these ferocious beings. Why employ them? In country traders would not the Lascars be more trustworthy?

36 Blowing up by gunpowder.

36 There is often great carelessness in placing the gunpowder among the stores; we have known it, in common barrels, placed in the run of the ship, among the cabin stores, into which the steward daily entered with a light.

37 Missing stays.

38 Taken aback close in shore, no room to wear.

39 Famine and drought.

39 These ought never to occur in a merchant vessel. In men of war we have known two instances when the first was upon the point of realization, but happily averted just in time. We hear repeatedly of merchantmen requiring the aid of supplies from passing vessels; and some awful and most distressing events of this nature have happened to the timber laden ships, which might have been prevented if precaution had been observed. A chest in each top, and one on deck, stored with preserved meats, &c. would be available in cases of necessity; and as the required articles of food are not costly, they should be provided. Unhappily low freights, and the dictates of economy are sad repellants of humanity.

40 Improper anchorage.

41 Striking on unknown shoals, rocks, and banks.

42 Crew cut off by South Sea Islanders.

42 Such deplorable events occur generally, if not always, from a want of due care. Savages, however friendly they may appear, are not to be trusted; but it sometimes happens that the bad conduct of the crews of ships leads to rencontres, which end in their destruction. There is often a natural result springing from men's actions. Bearing upon this subject it may be asked what is to be expected from these wild denizens of the coral isles, if the Captain of a ship sells to them fire-arms that are not proof; and which, after being used once or twice, burst; would not the deception be resented, and in a way those untutored beings think to be the only one which can appease their angry spirit, excited to the height of revenge?

43 Death of the captain, the mates being incompetent.

43 Events of this sort have occurred, and are to be expected whilst men are appointed to stations which they are incompetent to fill. And surely there can be no stronger reason for the necessity that exists for the examination of the officers of the mercantile marine than this fact.

44 Neglect of latitude by the stars.

45 By animals; there is one authenticated instance of a ship being destroyed by a whale. There is a liability from rats.

46 Springing a leak.

46 Some insoluble and extremely tenacious cement was long a desideratum, for paying the seams of ships, and joining together pieces of wood. Mr. Jeffry has furnished an ingredient

which appears to have surpassed every expectation. Ships now, need no longer spring a leak from butts starting, or seams opening; and every part under hatches may be made water-tight. The inventor is a real benefactor to his country; and we think deserves every possible encouragement from it. The Ancients were so sensible of the propriety, and it may have been, of the policy, of awarding praise and justice to inventions and actions beneficial to the interests or the character of the state, as to commemorate and honour these in some way or other—thus:—to the point—we read that, Phillatius, a learned Athenian, having invented a new glue or paste, his countrymen decreed him a statue. Mr. Jeffry's cement is of incalculable importance in naval architecture; and as its merits have been tested, and proved, we hope in a short time the reports of vessels springing a leak will entirely cease.

47 Shaving headlands too close in rounding with an on-shore wind.

47 Very clever seamen may want prudence, on this head. A deplorable event occurred not long since. Two vessels were passing Cape St. Vincent with a scant wind; the more prudent of the two masters, tacked; the other out of bravado, held on, and the consequence was that the ship struck, and soon went to pieces; only four young men of the crew surviving, by swimming to the shore during the night. The Captain was drowned.

48 Sub-marine volcanic action.

49 Sleeping on watch.

49 We fear this is a common practice. We have heard of a recent case of the mate, the officer of the watch, being found asleep, whilst the vessel was scudding under reefed sails in a very heavy sea. The offence is so unpardonable, that we think there should be a fine attached upon every occasion that it is committed; but there should be three reliefs in all vessels.

50 Running for harbour in a revolving gale, when an offing would be proper.

51 Sailing from a port when the barometer would induce a prudent captain to remain at anchor.

50 and 51 A barometer would be the best remedy for these errors.

52 General carelessness.

We return to the evidence. *Q.* 197. "Have you any other suggestion to offer for the prevention of shipwrecks?"

A. "It occurs to me that there are several means of improving the state of the shipping and of the crews. There is one thing which has been pointed out to me frequently by shipmasters, namely: the insufficiency of the crews in number; the present proportions may be said to be from 100 to 150 (tons) six; from 150 to 200 eight; from 200 to 250 ten. Now, I do not say that those proportions exist in all shipping; but that they do exist frequently, I know; whereas it is thought that the proportion ought to be at least a fifth or sixth more, namely: from 100 to 150 eight; 150 to 200 ten; 200 to 250 twelve. Of course I am not speaking dictatorially; I am only saying what a proper Marine Board ought to have the power of fixing."

This is an important point which seems to require some regulation; for it appears certain, generally speaking, that British ships are undermanned; and the consequences that may arise from that circumstance, and which indeed, have often arisen, may lead, as they have led, to very distressing results.

Q. 210. "Do you think that many ships are lost from want of hands?"

A. "I have no doubt of it, and on account of the insufficiency of accommodation. In British ships the men are not treated as they ought to be, I have taken particular notice of their place of abode, which is in almost every ship of small size, a small dark cave, without light or warmth, or not such a kind of place wherein they may rest and repose themselves; and in point of size it is sometimes six or seven feet square, for six or seven men, stowed half full of ropes and sails, damp and wet."

Q. 211. "Do you conceive that it injures their health?"

A. "I think that it is a most important matter connected with the strength and efficiency of the crew. The very small accommodation the poor men have in bad weather, completely enervates them; they are thus rendered unable to perform their duty, and shipwrecks follow from the inability of the men. I went into the forecastle of ten different ships and measured them, and I have the measure here. There was no proper accommodation where they could stretch themselves out. There was room for the hammocks, but in several of them there was no sky-light, and if they shut the hatches of the forecastle, there was no air and no light. I also consider that the want of accommodation in the forecastle of the ship may be one of the causes of intemperance, because if the men have no place to repose themselves in a seaport after arriving at the port, the men are compelled to go to a public house, and thus become intemperate. Comparing them with foreign ships the contrast is most obvious. There is ample space for every foreign seaman; they have box-beds, (standing, or fixed bed places, which our large ships also have,) and uniformly a painted cabin for the seamen. They can sit round the fire, and talk and read, and amuse themselves, and they have a place of repose whenever they retire from their work; but in nine-tenths of the smaller British ships it is quite the contrary; indeed, I have the particulars here of the various sizes of different forecastles; I believe there was only one in ten vessels that I measured that was painted; the others were all the bare wood. This is a serious reflection on the shipowner, and should be remedied. There is such heartlessness in consigning human beings to the dog-holes that are but too often appropriated to the use of seamen, as to create much surprise in those who are not aware of what an absorbing principle the love of gain is. It has been observed that, little sympathy exists between the employer and employed. That is very generally the fact; in many cases the owners do not trouble themselves about the matter. I think it is a point which requires interference."

(To be concluded in our next.)

DESCRIPTION OF ZANZIBAR AND ITS ISLANDS.—*By Capt. Owen, R.N.*

(Concluded from p. 196.)

THE Ras Chuaka has a cliff abutment; to the north it is about half a league broad, and but little elevated, but the isthmus near a league south of the extremity of the Ras is hardly half a mile wide. Ras Chuaka north extremity cliffs 6° 03′·3 S., 39° 30′·8 E.

The Ras is the eastern boundary of the Bay of Chuaka, four miles deep and near three wide; it is open to the north and very shallow. Muemba islet centre 5° 46′·8 S., 39° 23′·5 E.

From the Bay of Chuaka to Ras Ngoowy, the shore is unbroken, except by intermissions of cliff and sand beach, and the whole covered by a reef, that never dries, except at Muemba, before mentioned.

The anchorage westward of the town of Shangany, or Zanzibar, as it is generally called, is covered on the north by three islands which stand on very considerable coral reefs. These islands are named Chapany, Kabandeekoo, and Changoo. Kabandeekoo islet centre at high water, 6° 7′·5 S., 39° 14′ E.

To the westward the anchorage is covered by the large islet Bawy, and its reefs, and to the south-west by numerous banks and shoals, which shall be described in order. Changoo Island centre, 6° 07′ S., 39° 13′·1 E.

Chapany, sometimes improperly called French Island or Isle François, by the French is about two miles north of point Shangany and the town; it is the eastern of three islets all of them wooded, therefore visible at some distance; their surface is otherwise low. Bawy Island centre at high water, 6° 08′·9 S., 39° 11′·1 E.

The reef of Chapany extends east nearly half a mile from it, leaving a clear passage between it and Mtony, on Zanzibar, of about the same width (viz half a mile), called English Pass. Great Larkbree sand centre, 6° 11′·1 S., 39° 12′·7 E.

There is a sandy point with a few rocks on the strand called (by us) Cliffend, it is E.N.E., true, from Chapany, a little more than a mile; from Cliffend to the town the shore is shoal, the two fathom line being about 150 fathoms off the beach, where the three islets are in one, bearing W.N.W., and 300 fathoms off shore when Changoo west extreme bears N. 60° W., and Chapany east extreme N.N.W. true bearings. For passing through this channel from the north or south the best rule is the eye; but it may be observed that the depths by the lead may be taken on the Zanzibar side, as that shoals to more gradually than the reefs, which are almost always sufficiently visible, and particularly between half ebb and low water. Little Larkbree sand centre 6° 12′·2 S., 39° 13′·7 E.; Eastern Harp sand centre 6° 14′ S. 39° 9′·9 E.; North-east Harp sand centre 6° 12′·7 S., 39° 9′·7 E.; Hamees east sand centre 6° 11′·8 S., 39° 9′ E.; Western Hamees sand centre 6° 11′·8 S., 39° 8′·5 E.

Kebandeeko is a very small islet, and stands on the same platform of coral reef as Chapany, and is about half a mile from it to the W.N.W. Twice as far from it, in the same direction is Changoo, about the same size as Chapany. Between the coral bases or reefs of Kebandeeko and Changoo there is a narrow pass of 200 fathoms wide called French pass for which no other marks can be given than that it is nearer Changoo than to Kebandeeko, and to keep a good look out; at low water the channel will be clearly marked.

These reefs are almost a-wash at low water, and in many parts dry. The greater island of Bawy is south-west about two miles and a half from Changoo; and between them is the grand pass, in which the only danger we discovered was Morgan patch in 6° 6′·6 S., 39° 11′·9 E.,

which is in the same line as that of the north shores of Changoo and Chapany when they are in one bearing E. 19° S. true, and when the extremes of Bawy bear S. 14° W., and S. 24° W., and it is sufficiently visible and very small. North extremes of Chapany and Changoo in one S. 71° E.; Bawy extremes S. 14° W. to S. 24° W.

But in navigating any where near any of these coasts, the infallible rule is to have a trustworthy seaman at the fore-top-mast-head on the continual look out.

The outer Morgan shoal in 6° 03′·3 S., 39° 09′·5 E., and bears north-west from Changoo, about five miles, and N. 16° W. near six miles from Bawy; viz. their centres subtending 29°; but the depths are every where on this side Zanzibar very irregular. North-west extreme of Zanzibar N.N.E. $\frac{1}{2}$ E., near three leagues; Changoo S.E., Bawy S. S.E., (about $3\frac{1}{2}$ mile from each). The fort E. 25° S.

The coral shoal bank extends about half a mile southward from Chapany and Kebandeeko; but a mile and a half south of Changoo. In the same direction, or when the west extreme of Changoo bears N. 2° E., and Bawy north extremity W. 9° N., and the Fort E. 25° S., there is a knoll with three and a half fathoms; and when Bawy north extreme bears N. 51° W., Changoo west extreme N.N.E., and the fort flag-staff E. $7\frac{1}{2}$° S., there is another knoll of three fathoms.

From Bawy N.b.W. $\frac{1}{2}$ W., its shoal extends about half a league and the outer Morgan is two leagues in the same direction; between these may be deemed suspicious ground: S.S.W. (true) from the centre of Bawy there extends a spit or reef that dries with the tide near a mile, and shoal water a quarter of a mile farther in the same direction; this we called Bawy reef and shoal; and it forms the northern limits of the western pass, whose southern boundary is the shoals of Hamees, which are two (each) crowned by a dry sand.

From the western Hamees sand, always visible, shoal water extends half a mile N. 54° W., but when the centre of Bawy is N.N.W., that line passes clear to the westward of all of Hamees banks and shoals but would lead within or to the eastward of those of John Cow.

The Hamees banks are near a league to the southward of Bawy centre.

S.S.E. (true) about a mile from the Inner Hamees bank, are the northern dry banks of the great Harpshell bank, very many parts of which are dry and a-wash at low water; but it has four patches always dry. There is a good pass between these north Harps and Hamees sands, but the water is shoal a quarter of a mile from them into the pass, and there is one knoll with three and a half fathoms mid-channel between the western Hamees and Harp banks about three-quarters of a mile from each.

Near a mile and a half south of the northern Harps are the south-eastern Harps, two dry sands always visible; these form the western limit of the great southern channel, of which Choomby island and its bank form the eastern boundary; this is near a league wide.

There are two rocks or islets off the south end of Choomby island, called the Twins or Undoon by the natives.

The western coast of Choomby is steep and very clean but to the east and north-east it is foul for a mile N.E.b.E. of the north point.

Returning northwards towards the roads of Zanzibar, the bank of Maja is near a league north of Choomby, and a full mile westward of the rocky point Maja; which may be known easily by the straggling rocks on its sandy beach.

Between the rocks of Ras Maja and the bank Maja, there is also a narrow channel with good depths of four and five fathoms, but not used except to visit the parts thereabouts.

N.N.W. of Maja bank is the Little Larkbree* sand generally dry, the bearings from which are Chapany east extreme just open with the fort, but a little shut in with Point Shangany N. 16° E., the cliffs of Point Chuckwany, (or the first rocky cliff south of the town) due east, the southern Ukomby just opening to the eastward of the northern Ukomby S. 28° E., and the west shore of Choomby south.

The great south pass is between the Little Larkbree and the Maja banks.

The Great Larkbree sand and bank is half a league north-west of the Little Larkbree; and the line of the Ukombies in one N. 28° W. from Little Larkbree leads over two other shoals, and to the east end of the Great Larkbree bank or shoal; from which the fort bears north-east (true) from this spot the Great Larkbree extends nearly west for upwards of half a league. The western point of the Great Larkbree bank is due south of Bawy, east, extreme and S. 71° W., from the fort, between which and the south reef of Bawy is the west pass in which are Mudges Threes bank; there is as little as two and a quarter fathoms in one spot of this, due west half a mile from Great Larkbree west-spithead, and due south a mile and three-quarters from the west extreme of Bawy. Between Mudge bank and Bawy south reef the west pass is clear nearly a mile wide, and about the same between it and Hamees north-west spit on its S.S.W.

If the west pass be used, it must also be remembered that the western shoals of John Cow bear S.W.b.S. (true) from the centre of Bawy upwards of two leagues, and that the shoals of John Cow are the western dangers off Zanzibar island discovered by us.

Returning to Pass island or Choomby, from it Hog and Kwaly isles bear about S.E. $\frac{1}{4}$ S. (true) three leagues, and four and a half.

The navigation is quite clear outside of that line, or to the westward of it, except the Ariadne Three-knoll, from which Choomby bore N. $\frac{3}{4}$ E. (true) three miles and a half; Kumbeeny hill N.E.b.E., and Point Menai due east nearly eight miles. Ariadne Three-knoll 6° 19′·8 S., 39° 13′·3. E.; Choomby N. $\frac{3}{4}$ E. three miles and a half; Kumbeeny hill N.E.b.E.; Point Menai east 8′.

South-east (true bearing) about ten leagues from Ras Kizimkaz is Latham island in 6° 54′·2 S., 40° 00′ E., which is very dangerous, because of the velocity and irregularity of the currents in its vicinity. It is about half a mile in length from north to south, and 200 yards from E. to W.; it is about 10 or 12 feet high, composed of coral or Madrepore, and covered with sea-fowls' dung about 2 feet deep, and in holes even 5 or 6 feet deep, and so loose as to admit, unwary people, like snow. The sea-fowls of various species were quite fearless, and even attacked our

* Larkbree was the name of the Arab governor.

people.* There is a bank of shoal soundings from 6 to 10 fathoms, two miles on its south-east, and round by the east to the north-west; and one mile off, on its west and south-west. From 10 fathoms it deepens very suddenly to great depths, except on its north, where it deepens less suddenly, but still quickly. The entire bank affords good anchorage in fine weather, it is about E.N.E. $\frac{1}{4}$ N. eight leagues from Point Poona on the main land.

The banks and dangers north and north-west of Zanzibar are the Leven bank; she anchored a night in 8 fathoms on it, but Captain Moresby, in the Menai, had 6$\frac{1}{2}$ fathoms on the same bank, although his guess distance was very erroneous, (he states his distance off shore to be ten miles,) from the Leven's anchorage the east extreme of Zanzibar island, bore S.b.E. $\frac{1}{2}$ E., and the north extreme of Moina-moina S.W. $\frac{3}{4}$ S., or the angle they subtended was 53°, about four miles and one-third off Ras Ngoowy.

This bank did not appear to be extensive, and has very deep water all round it. The Tumbat west bank commences about half a league to the westward of the north point of Tumbat; the least water we found on it was 9 fathoms; it may extend even as far west as Alek Seven, but our soundings on it did not exceed a league and a quarter to the westward of Tumbat; nor are we certain that it may not proceed from the reef north of Tumbat, on which Moina-moina stands; but we have understood, and believe, there is deeper water between this bank and Tumbat. Leven bank anchorage 5° 39′ S., 39° 20′ E.

Alek Seven is a knoll with deep water all round it. From it Ras Ngoowy was just open north of Moina-moina E.b.N. $\frac{1}{4}$ N., true, near six leagues, therefore, only visible from aloft; Tungaty mountain bore N. 19° W., and the south extreme of Zanzibar seen bore south-east.

There is another shoal, (called Boudoin Knoll in 5° 58′ S., 39° 10′ E.,) reported by Mr. Boudoin, which we did not see; it is a league and a quarter west from the southern cliffs on the shore of Zanzibar; Bawy bearing S. $\frac{1}{2}$ E. eleven miles, and Tumbat south point just shut in with Ooswamemba or Sandy point N.E.b.N. six miles from the latter.

Having thus enumerated all the shoals and banks we found, we proceed to give the necessary directions for entering and going out.

In the north-east monsoon a ship bound for the town of Shangany or Zanzibar, may round Ras Ngoowy at any convenient distance, either over or within the Leven bank of soundings, and leaving Moina-moina a full mile or more to the southward, until the western coast of Tumbat is all open; she may then coast that island at a mile, more or less, she will carry from sixteen to twenty fathoms, except in crossing Tumbat west bank, if she be far enough out for that. Rounding the Ooswamemba in like manner, she will carry soundings all down the western coast from twenty-four fathoms decreasing gradually to the southward; she may choose by which pass she will enter, either the English pass within all the islets, or the great North pass or Grand pass between Changoo and Bawy. If she choose the former the reefs

* The sea fowl, gannets and sooty petrel, old and young, ranged themselves on the outer cliffs to resist our people at landing: and some ludicrous adventures occurred with them.

There is no landing on it except at a small sandy track on its south-west.

will always be clearly seen at half tide; she may haul in for Cliff point which is full a mile E.N.E. of Chapany islet, until she be in from seven to nine fathoms. She may then steer by the eye, keeping about three times as far off the islet Chapany, as from the shore, until all the islands be in one, she will then be in the narrowest part of the channel; she must then haul out to the westward, so as to get mid-channel between the shores of Zanzibar and Chapany, when the latter bears N.W.b.N. (true). She may then choose her berth at pleasure at any convenient distance off Point Shangany, which is quite clean on its western side.

To proceed out to sea from any part of the anchorage, by the great south channel steer for point Chukwany, the first rocky point south of the fort, until Chapany be almost shut in with Ras Shangany, or quite so. Choomby or Pass island will then bear S. ½ W., then steer on that course, keeping Chapany just shut in with Shangany, as before said, until Chukwany bear E.b.N; when you may haul out to the westward for the East Harp, until Choomby bear about S. ½ E., then steer out south until past it; then S.E.b.S. until past Kwaly island; when a ship may haul out E.S.E. to pass between Kizimkaz and Latham islet, or S.E. ½ S., or S.E.b.S. to pass between the latter and Point Poona.

In the southern monsoon it is better to make the land about Point Pona, from which steer north or N.b.W. to make Kizimkaz, thence steer for Kwaly, and rounding it and Choomby at a convenient distance, steer for the rocky capes, Maja or Chuckwany, until Choomby bear S. ½ W., and Chukwany from E.N.E. to E.b.N.; then steer N. ½ E., or with Chapany just shut in with Shangany; and when Chukwany bears E.S.E. steer as convenient for any required berth, or anchorage; observing whether coming in, or going out, that if Little Larkbree sand is seen, that will be a sure guide, the channel being between it and Maja bank; and Little Larkbree may be approached by the lead.

To sail thence northward; steer to fetch Mid Channel between Chapany and Shangany; and so keep until the former bear N.W.b.N.; then steer for Mtony, until you be three times as far from Chapany, as from the shore of Mtony; steer then for Cliffend, until Changoo be open north of Chapany, then haul out to the north-west and coast as convenient.

Having given the marks for all the shoals already, it appears superfluous to give more particular directions. For the Grand Pass, we, however, may say, keep a good look out to avoid the shoals! Or keep the fort east until Changoo bear N.b.E., (or N.N.E., if you are not afraid of the Middle Three); steer for Changoo on either of those bearings until the north extreme of Bawy bear west; then steer to pass on either side of Morgan patch; by bringing Bawy east extreme to bear S.b.W. ½ W., before Changoo bears east. Then steer out N.b.E. ½ E.; or keep Chapany open to the south of Changoo until Bawy centre bear on any other line than S. 19° W.; that is to pass between Morgan and Changoo, bring Bawy centre S.S.W., westerly; and steer out N.N.E., easterly.

If to pass between Morgan and Bawy; bring the latter south or S. ½

W. before Chapany is shut in with Changoo and steer north or N. ½ E., until Chapany open north of Changoo; then steer as convenient.

It would be superfluous to give further directions, since a study of the plan will furnish them more satisfactorily; but be it observed there are no pilots worthy of any confidence to be had any where on this coast; therefore, he who navigates it, either with or without native pilots, cannot well dispense with the charts, which are as perfect as the time occupied on each part enabled us to make them. But as this time did not exceed a few days at Mombas, at Chak-chak, and at Shangany, not stopping more than a night at a few other points, it would be presumptuous to suppose our survey quite perfect. Her Majesty's ships visiting those ports, should when convenient, examine our charts for the spots they may find themselves upon, and report their errors and deficiencies; furnishing in such cases in detail, all their observations, bearings, angles, soundings, &c., and they should be very careful not to found their own judgment on vague and indeterminate observations, which contain no precise elements for applying them to the plans, so as to enable the Hydrographer of the Admiralty to correct the error or omissions they may discover.

Zanzibar is a place of growing importance both in a political and commercial view.

Discipline in the Merchant Service.

"There are persons who substitute an aching solicitude for the reasonable discretion and care, which is all that is required in the performance of duty."

Mr. Editor.—The readers of the *Nautical* have been favoured, this month, with a 'lengthy' criticism (interlarded with discursive remarks, and startling anecdotes,) upon the observations of "A cautious, and, therefore, a true friend to the Sea Service," on the abstract point of the Masters of ships being allowed the power of inflicting corporal punishment upon seamen.

The composition appears under the initial sign P. P., and is dated from a position—'quite at sea'—southerly of the line; which circumstance, perhaps may have induced the writer of it to fancy that he was there privileged to pass the moral line of courtesy. The latitude named is, we are told, a very exciting one, one of intense heat, which induces thirst of mind as well as of tongue—a region

> "Where thoughts arise to inflame the soul,
> And temper and discretion lose control."

I am not to be surprised, therefore, that some way-faring voyager over the watery waste should have been tempted, under such influences, to indite a long epistle to the Editor of the "blue book", extolling that

which all sober-minded men *now* condemn, to wit,—the use of the cat-o'nine-tails.

If Sir, we did not know that a great many humane, worthy, and gentlemanly officers are in the Mercantile Marine, and think it right that, the "Mauvais" therein should be told of their faults in order to their correction; as well as that the former should not take the gratuitous interpretation of our words for granted by our silence, I should have left the advocate of "flogging" in "all his glory," exulting in—what?—savage delight of torturing his fellow beings, and of governing men by physical means rather than by moral conduct!—No! Sir, I will not do him an injustice, I would rather say:—exulting in a fallacious hope that by obtaining a discretionary power, fearful in the responsibility it involves, (and which from the inconsistency of human nature all men are liable to abuse) *his* condition, as he imagines, would be made more *easy*!

It would appear that with some particularly constituted minds, corporal punishment is the *sine qua non* without which discipline cannot be maintained. In speaking on this subject, Lord Bentinck, when Governor General of India, said:—"An insuperable terror appears to reign over the imagination, and like the native superstition, that sees in some charm or amulet the only protection against all evils that can afflict the body or haunt the mind, so corporal punishment is venerated as the sole guarantee for efficiency and good regulation." His lordship emphatically added:—"I denounce this as prejudice, it is opposed to reason, it is injurious to those feelings of the most importance for us to cultivate (among subordinates) satisfaction with their condition, and allegiance to the State." It is my belief, Sir, and I think all reflecting unprejudiced persons who have studied human nature closely, will coincide with me, that, if this power of inflicting corporal punishment on merchant seamen were conceded to the masters of ships, it would lead (looking at the violent and extremely intemperate conduct often found among them, and which, none will be hardy enough to deny:—for, the displays are unhappily notorious,) to mutiny, if not to murder; and assuredly, render the condition of the Captains much more miserable than it is at present.

The spirit which runs through the epistle of the Champion of the "Cat" (a term by the bye, well applied to the instrument of torture, in allusion to the ferocity of the Feline tribe,) partakes of the character of the fiery rays which shoot down their intensity upon the seat of thought of those who are exposed to them, in the latitude where the date of the communication was marked. The position, Sir, is literally in a region of caloric, for, in addition to the furnace heat above, there is said to be, fire below! And, from all I can gather, being quite at sea in the matter, myself, it would appear that the imagination is there, worked up to "an oil" of a most inflammable character. I have heard many voyagers speak of the effects arising from such an ardent state of things, especially when all around is reposing in calm, and the glare of a vertical sun, which enlightens everything but the mind; and sweetens the life spring of all animated Nature, whether of the water or of the sky, but sours the temper of man!

" Oh! reason! attribute of the sentient mind—
What spell doth dim thy sight,
And in the depth of gloom thy wise perceptions bind,
When all around is light?"

There is, Sir, something ominous in the incidental circumstance of this very grave subject, involving severity of rule, employing the meditations of a wanderer just as the seaman's loved star, Ursa Minor,—the star, par excellence, of his home,—had sunk beneath the wave, and the cross of the nether pole, the bright constellation of the Austral sky had started up to confront him, as it were, an emblem of Him whose precepts enjoin us to mildness, and to have compassion one for another. The miseries of life are innumerable; those of the seamen in particular are many, and of the severest description; why add to these by putting it in the power of any vindictive and violent temper, to mutilate his back, as though he was an irrational being without physical or mental feeling? A stand should be made against inhumanity in any shape; and such an act as flogging with the cat is cruel, inhuman, degrading, and, to the sight, intensely disgusting; it is unnecessary, and, therefore, uncalled for. The practice, if once admitted, would soon render it habitual, upon all occasions, and familiarity with it would tend to make the heart of the inflicter callous to the dictates even of common humanity, to exasperate and inflame the spirit of resentment, and revenge, rankling in the breasts of the sufferers, until it broke out into open mutiny, or in the committal of a tragical act.

It would consume too much of your valuable space, Mr. Editor, to enter here into arguments to show why the effect would be different in a merchant vessel, and the man-of-war. No doubt many of your readers will readily light upon very cogent reasons, why a certain degree of discretionary power, may be safely admitted to some and not to others, when attendant circumstances are widely different.

The region of the epistolary date, as I have already remarked, is one of caloric. It is rather singular that the moment we cast our eyes upon the latitude, some remarkable accounts which I had read in old "tomes" many many years ago, rushed upon my recollection as vividly as ever, but not with the same effect as formerly, for then, being a mere shrimp, my hair fairly stood on end with affright. In those tomes, the Ancient Mariners told lamentable tales of calenturas so affecting the craniums of some of them, as to set the imagination "all in a flame," bringing on a sort of irrational crisis, and making pitiable objects of the afflicted creatures; filling their minds, I believe, however, "brains" was the word, with extravagant chimeras; some were clamorous for the attributes of power, which, in those days, were supposed to be possessed by the renowned Prester John, and vehemently asserting that one and all were qualified by sobriety, conscience, mildness, in fact, all the moral qualities that could dignify their nature, for the station. And it was said, I recollect, by the chroniclers, that this predominant feature of the mental disease, generally took place at, or about, "seven bells." If my memory serves me rightly, that was the expression, which to us landsmen is, of course, "all Greek!" However, in another portion of the work, the narrators broadly hinted (as they said) that the hallucina-

tions of the disordered intellects of the afflicted, occurred usually about the time when the sailors "freshened the nip." This is another technical, which I am utterly at a loss to interpret, and am, therefore, Sir, constrained to leave its meaning to the initiated in the mysteries of nautic lore.

It would, Sir, be a work of supererogation to apply, seriatim, to the various remarks and interpretations your correspondent has been pleased to apply to the plain and direct matter contained in the paper of the "Cautious Friend;" but it would be very easy, I think, to convince your unprejudiced readers, by his own words, that the power he craves should not be placed in the hands of the captains of merchant ships. Very rarely, indeed, can the prejudice of an interested party afford sufficiently disinterested proofs that shall convince those who are divested of the former, that what is urged is correct and just. Self-love, self-interest, a love of power, sadly hoodwink the judgment; and it is an every day occurrence to find men pertinaciously, and very honestly, insisting upon the view they take of a given subject, being the true one, when they may be decidedly wrong.

The time, Sir, is past, happily, when coercion and severity would find general advocacy. That the world is beginning to find, and to feel, that men are no longer to be governed by a rod of iron, is plain to those who have watched the events of the last thirty years; and it is a blessing to society that it is so, for the slavery of subserviency, which, in almost all stations and conditions of life is felt, is sufficiently galling of itself, to make us all desire that no unnecessary restraints should be added; and, I am sure, Mr. Editor, that there can be but very few among your readers, who would suffer their minds to be so warped, as to believe that, a brutal practice is necessary to insure a desired good, when the latter can be attained by milder, more just, more humane, and more effectual means.

It is not my province, nor is it my intention, to write a treatise on the proper mode of governing seamen in the Merchant Service; yet I am perfectly satisfied, from a pretty long acquaintance with that class, that it can be done without resorting to flogging. It appears, Sir, that your correspondent is puzzled to find out the meaning of the first paragraph he quotes! For that, at least, the writer of it is not to blame; but, though your correspondent's sagacity has failed him in that instance, his ingenuity seems not to have forsaken him, for he has thought proper, in the ignorance which he professes, to pass judgment, and to apply a sentiment which is not the "Cautious Friend's", who, contrary to the inference of the critic, holds a high opinion of the profession generally, and of the respectable portion of it especially; but, with those who disgrace it he can have no sympathy. From your correspondent's advocacy of the lash, and his earnest desire for the power of inflicting it, as the law which would authorize it must be general, he must entertain, indeed, he says as much, the opinion that it would be safe in the hands of the whole 30,000 master-mariners constituting the chief officers of the Mercantile Marine.

I shall give here, Mr. Editor, a fact, (I do so reluctantly, but it is *forced* from me,) of a very recent occurrence, from which, from the multitude of humiliating accounts inserted in the public papers, the trials,

condemnations and transportations, from the voice of the master's themselves, in the *Nautical Magazine*, from facts stated by Naval officers, and from the Report of the Committee on Shipwrecks, it will be seen that the qualified expression—"Cautious"—used by the "True Friend of the Sea Service," was not *mis*-used by him; and I think that many, if not most of your nautical readers, Captains of the Merchant Service included, will be very much of the same opinion.

The Master of a ship, on shore considered a respectable man, on a voyage occupying eight or nine months, finding that brandy was not sufficiently potent to stupify his senses, those senses which his Maker had bestowed upon him as a rational being, for rational purposes, was in the habit of mixing *laudanum* with his potations; and in a state of wild derangement appearing upon deck, a most humiliating sight, with a drawn sword, which he brandished about in a threatening manner! But for the mate, and the steadiness of the men, the ship would have been lost; as it was she did get on shore. What! intrust such a character as this with power to flog his fellowmen? Surely, Sir, no sane person would, for a moment, think of such a thing—yet, such would be the case if a law were passed to allow it, because it would not be made partial. Only think, Mr. Editor, of such a skipper being in the command of an opium freighted ship on a smuggling voyage to the "Celestial" Empire! Only reflect, Sir, on the fiend-like pranks, such a master of an English ship, would play among the "long-tails", and upon his quarter-deck, where he reigns "lord paramount"! Would such demoniac capers tend to promote discipline, or quiet demeanour among the subordinates? It may, indeed, be said, and I sincerely hope that it would be truly said, that this is a solitary instance—an extreme case it is no doubt, but, I am urged by your correspondent's unwise zeal, to declare that others have come under my own observation, where the persons, although not mixing maddening drugs with their beverage, were equally unfit to be entrusted with such a responsible power. I have heard of a case, where the ship's spirits ran short, of a master using *Eau de Cologne*, as a dram; and I have, in a *foreign* port, seen the distressing sight of an English master of a ship in a state of inebriety at noon-day! He, unhappy being, paid the forfeiture of his life there, to his intemperance.

I presume to think that, by this time your correspondent will be prepared to alter his judgment, and to do me the justice now to believe, that the "Cautious Friend" did not write upon a subject he was totally ignorant of; my object was to act the part of a true friend; your correspondent has extorted the unpleasant disclosures I have made, his brother officers must thank his zeal for their appearance, which most assuredly I never, otherwise, should have thought of "putting in print."

I cannot refrain from the pleasure of complimenting your worthy correspondent upon the superior qualifications, which he has, with so much complacency told us of, and which enable him to keep his men steady and peaceable; (if he can do so, why not others? and as this is done without the "cat,," what does he want the power for?) I should say, from his own confession that he ought to be a happy man in his ship, but the tenor of his "Line" epistle certainly would make us believe otherwise.

I have been long of opinion that the repeated instances of insubordination on the one part, and harsh treatment on the other, which we "land-lubbers" hear of, are, in a great measure caused by the want of a code of definite laws for the guidance of the officers and the men; and in one thing we are agreed, that this code should be drawn up by nautical men, in plain language, with none of the lawyers' quibbles or mysticalities. I have no desire to extenuate or hide the faults of the seamen, but it is notorious that their comforts are not attended to by the owners of ships; the dog-hole they are thrust into is most disgraceful to the humanity of merchants.

The impression upon my mind is that, much of the mischief arises from defective early education. When the time comes that our seamen shall be duly instructed in their religious and moral duties, carefully; and *general* temperance and humanity (I mean the term in its widest sense) shall guide the conduct of those under whom they shall be subsequently placed, then we may hope never again to hear of such mortifying complaints. An enlightened writer says,—it may seem foolish, indeed, to assert that any society (or class of men) should ever come to be so well informed as to make a proper use of self-love. Let us not despair. We may improve slowly; yet, if *every one* does even the little that he can, in shewing by *precept* and *example*, what things a rational and accountable being should desire, and what he should avoid, and reject, certainly the time may come when self-love will never be so misapplied as to be necessarily followed by penitence and sorrow.

I apologize, Sir, for trespassing so much upon your valuable space, and conclude by wishing your correspondent beyond the "Line", a pleasant and prosperous voyage, and have only to hope, that he will believe me, when I say that I entertain a sincere desire for the welfare of his profession, and a high respect for many of its members.

THE CAUTIOUS FRIEND, &c.

P.S. The insubordination on board the old Tonnant was, we are told, among the "Reefers",—there were 50 or 60 on board!

THE MARINERS' COMPASS.

SIR.—It is pretty clear that your correspondent, who, at p. 246 subscribes himself "A Practical Engineer", has not clearly understood Mr. Walker's remarks upon the Compass, and the method he has adopted to prevent mechanical oscillation in the Compass card. Your correspondent says, "on a drawing room table, or on the deck of a ship in a motionless sea, the card would, no doubt, act freely; but when there is any sea on the vessel, each wave will cause a concussion that will bring the compensation regulator in contact with the centre, and then the card will vibrate, and the succession of waves will keep it in constant motion." Mr. Walker has somewhere said "It is one thing to enumerate a principle, and *another thing to make the reader comprehend it.*" Now, for the quotation given. The "Practical Engineer" evidently believes that when one of Mr. Walker's compasses is placed

upon a drawing room table, or in a motionless ship at sea, the vertical pivot upon which the card of the compass is suspended, will *not touch* the compensation regulator, whose diameter is only *a hair's breadth* greater than that of the pivot passing through it, but he thinks that during rough weather "each wave will cause a concussion that will bring the compensation regulator in contact with the centre, and then the card will vibrate." If your correspondent will re-peruse Mr. Walker's remarks he will ascertain, that the point of suspension, centre of percussion, and centre of inertia of the compass card, are kept in the same vertical by the pivot passing through the hole in the compensation regulator, and when this *delicate adjustment* is made, the needle is then *magnetised*. The magnetic attraction and repulsion of the earth at Portsmouth is in a direction only 21° from the vertical, and the tendency the compass-needle has to dip (upon a drawing room table or any where else) will keep the compensation regulator in *constant contact* with the vertical pivot; in fact the compensation collar must necessarily lean against the pivot with a force proportional to the dip, and magnetic intensity of the needle; and, therefore, if it be always in contact there can be no *concussion*.

Those who, like your correspondent, have taken but a superficial glance at Mr. Walker's papers believe, that because the pivot passes through a compensation regulator, the compass must be subject to great friction and the card cannot act freely. They, however, forget that Mr. Walker's compass has a *double suspension*, the cone below the card *being jewelled and moving freely on the ordinary pivot in the compass bowl*. So that, even if Mr. Walker were to firmly wedge the compensation collar to the pivot above the cone, his compass would move as freely as any other compass of ordinary use now in ships. What he has proposed to accomplish is to make a compass that shall be sensitive and useful *in fine weather*, as well as steady in bad weather; and he will accomplish this desirable object *if his principles be understood* and carried out.

"A Practical Engineer" says "The broader the point of suspension is, whether it be of metal or of stone, so long as the free action of the card is preserved, the more valuable will be your compass."

Does your correspondent mean to tell us, that a compass card when placed upon the *broad end of a copper bolt* will traverse with the same amount of freedom or friction that it would encounter upon a steel pivot in the compass bowl. In the ordinary construction of large machines there may be some grounds for engineers *assuming* that, when the pressure is given, the friction may not sensibly vary with an increase of the rubbing surfaces, and that the friction varies nearly in the same ratio as the weight or pressure. Seamen know *experimentally*, that by adding weight to their compass cards, the free action of the card is impeded, and they know also that by sharpening and polishing the point of the compass pivot, the compass card traverses more freely in fine weather, but is more "volage" in a stormy sea.

The improvement which Mr. Walker has propounded, amounts to this,—He in no way interferes with the binnacles, compass boxes, or compass bowls now in use. He places upon the top of the usual pivot, rising from the centre of the compass bowl, a *cone*, in which an agate

is fixed, and fitted to the said pivot to allow the cone to traverse freely; from the top of the cone rises another finely polished pivot which passes through the compensation collar and supports the card which is again capped and jewelled. He adjusts the compass card in perfect equilibrium upon this upper pivot, and although he preserves the size of the magnet he removes the old balance weights and lengthens the card at least one-eighth. The needle being made perfectly hard throughout, *receives* and *retains* a maximum of magnetism, and in this way by reducing the weight, and increasing the magnetism, his compass must necessarily be at liberty to traverse freely in a horizontal plane, but prevented from vibrating by ordinary mechanical action.

To the Editor, &c. SINBAD.

REVIEW OF THE PHENOMENA OF THUNDERSTORMS, AND THEIR EFFECTS ON SHIPS OF THE ROYAL NAVY, *as printed from their official Journals in the Nautical Magazine.—By W. S. Harris, F.R.S.*

HAVING collected a great number of well authenticated instances of the phenomena of thunderstorms, and the effects of lightning, as recorded for the most part in the official journals of the British Navy, we may proceed to classify and discuss the facts which these instances present, with a view of deducing by the ordinary course of inductive science, certain results, the knowledge of which, whether they be considered in a statistical, or in a physical light, must necessarily prove of much practical value. It is, for example, of great importance to a Maritime power, such as Britain, to ascertain the amount of damage its fleets may sustain, under various circumstances, and at any given instant, by the operation of either of those powerful natural agencies to which they are so constantly exposed; and to calculate the probability of obviating or palliating such damage in future. On the other hand it is a main object of physical research, to discover under what circumstances any unknown power of nature, such as electricity displays itself, what is the amount of its mechanical or other action, and what are the meteorological or other changes attendant thereon.

For the sake of clearness we will proceed to deal with these two questions as distinct and separable, from each other; and first as to the statistical details which the recorded instances present.

The total number of ships of our Navy found in the preceding papers, and on which lightning has fallen in various parts of the world amount to 210. They include 82 sail of the line, 78 frigates, 40 sloops and brigs, 3 steamers, 2 cutters, 2 sheer hulks, 3 ships in ordinary. Upon these cases there were damaged by lightning 162 lower masts, 129 of which were the lower masts of line-of-battle-ships and frigates; of these upwards of 90 were completely ruined.

Of top-masts there were ruined or damaged 140; of these 106 were top-masts also of line-of-battle-ships and frigates, nearly all of these were destroyed as masts.

Of top-gallant-masts 120 were destroyed, of which number 92 were the top-gallant-masts of large class frigates. Besides this great destruc-

tion of material, the history of these cases presents a serious loss of life, upwards of 90 seamen having been killed, and above 200 severely wounded or hurt.

This statement is alone sufficient to shew the great interest of this inquiry, considered as a statistical question. It cannot, however, be supposed to contain the total amount of the damage done to our Navy by lightning, within the years over which the cases extend. It has been found very difficult from the little remaining record of such cases, to discover them, and when ascertained, to trace in the mass of manuscript journals of H.M. Ships, an authentic account of the facts. Considering the great number of ships employed in the service of our Navy since the year 1780, or thereabout; it is reasonable to infer from the frequent damage by lightning, known to have occurred, that only a portion of the real amount has been ascertained.

By way, however, of arriving at something like a fair approximation, within certain definite periods, it may not be amiss to select the cases which have been discovered from the commencement of the war, about the year 1794, up to its final close about 1815, and again from that period up to the year 1840; which present two periods of nearly twenty-five years each, one of war, the other of peace.

The following table exhibits the number of cases of ships of the Navy struck by lightning within these respective periods, so far as these inquiries extend:—

Table I.

War.				Peace.			
YEARS.	SHIPS.	YEARS.	SHIPS.	YEARS.	SHIPS.	YEARS.	SHIPS.
1793	1	1805	4	1817	1	1829	2
94	5	6	6	18	1	30	6
95	1	7	4	19	1	31	2
96	2	8	6	20	3	32	3
97	1	9	6	21	1	33	1
98	2	10	5	22	5	34	2
99	5	11	14	23	—	35	2
1800	4	12	16	24	1	36	—
1	7	13	9	25	1	37	4
2	9	14	9	26	—	38	6
3	6	15	6	27	—	39	4
4	3	16	2	28	4	40	5
Total amount in War 133.				Total amount in Peace 55.			

N.B.—This Table includes the cases of the same ship struck more than once.

The 133 cases in time of war, consist of 69 ships of the line, 49 frigates, and 32 sloops and smaller vessels.

The 55 cases in peace, consist of 8 sail of the line, 14 frigates, and 32 sloops and smaller vessels, including two steamers.

The following table shews the amount of spars damaged or destroyed:

Table 2.

War.					Peace.				
Spars.	Liners	Frigates	Brigs	Total.	Spars.	Liners	Frigates.	Brigs	Total
T-gal. masts	45	35	7	87	T-gal. masts	6	8	22	36
Top-masts	51	45	9	105	Top-masts	7	9	23	39
Masts	56	52	15	123	Masts	6	13	14	33

Of these spars above five-sixths were either destroyed or rendered unserviceable; of the 123 lower masts in the war, and which were nearly all masts of line-of-battle-ships and frigates, above two-thirds were rendered unserviceable, and the ships obliged in most cases to return into port for refit. Of 95 topmasts of ships of the line and frigates, 93 were quite ruined, and many of the top-gallant-masts were fairly shook in pieces.

Between the years 1810 and 1815 our Navy appears to have suffered considerably by lightning; within these years we have records of 35 sail of the line, 13 frigates and 10 sloops disabled or damaged. We had in these years a large fleet at sea; and it appears that of 12 or 13 sail of the line off the Rhone no less than five line-of-battle ships were in Sept. 1813, more or less disabled on the same night. The Ocean, 90, one of the ships, was obliged to go to Mahon and shift her mast; within these years 34 lower masts of line-of-battle ships and frigates were either damaged or ruined.

The number of seamen severely hurt or killed in these cases is considerable. The instances within the period of war, contain above 70 seamen killed, and 158 badly hurt or crippled, 21 who sustained severe temporary injury, and a great many cases in which the numbers hurt are set down as several or many.

The most remarkable instances of loss of life are the cases of the Repulse, 74, Sultan, 74, York, 74. The Repulse lost the services of 20 men in an instant; 7 were killed on the spot, 3 died soon after, and 10 more were so severely injured as to be of little use to the service after. The Sultan lost 10 of her crew, 7 being killed on the spot. In the case of the York all the men on the main-top-sail-yard were either killed or hurt. The case of the Sappho, 18, furnishes also a remarkable instance of the loss of life by lightning. In this instance 10 men were killed outright, and 14 badly hurt.* Besides these instances of loss of life we find very many cases in which from 20 to 40 men have been struck down at the time of carrying on the duty of the ship. In the case of the Cambrian of 44 guns, all the men on one side of the deck were struck down. In the Eagle, 74, we find a similar occurrence, and the greatest consternation prevailed. In the case of the Bellette, brig, no less than 28 of the crew were struck down whilst hauling in

* Mr. Burnett, the carpenter of the ship, an intelligent seaman, has kindly furnished the Author with authentic accounts of this case, which are not fully given in the particular log referred to in the preceding papers.

the head braces. And in the Thunderer 74, in Sept. 1799 we find all the watch in the main-top paralyzed so that they were obliged to be lowered down on deck. Such cases evidently shew the great danger and inconvenience to which ships are exposed in consequence of the electrical discharge falling on the crew.

Of the 133 cases during the period of war, 30 ships at least, that is more than one fourth of the whole, were set on fire in some part of the masts, sails, or rigging, but without any serious result having ensued. The fire having been by the great exertions of the crew kept down and finally extinguished.

The damage which has occurred in these cases has generally taken place aloft, or on those parts of the hull approaching the surface of the sea; we find but few instances in which any considerable mischief has arisen to the body of the hull, especially below the water line. It would appear by a review of these cases that not above one ship in twenty suffers any considerable damage in the hull. The most remarkable cases in these records are those of the Bellerophon, 74, Squirrel, 28, and Chichester cutter. In the Bellerophon's case, a butt end of a plank in the ship's side was started, the clamps of the main deck beam cut, and a rider underneath the deck split open. Some parts of the quarter deck also were perforated. In the case of the Squirrel, a plank was stove in the ship's side, and all the caulking loosened between the fore and main chains, so that the ship made eight inches of water per hour. In the case of the Chichester, the bulk-heads and berths below were all smashed, and part of the deck actually lifted off the beams.

It is not easy to arrive at a full estimate of the loss to the country in money, on account of the damage to its Navy by lightning. For independently of the calculation being a somewhat complicated one, the total number of cases cannot well be ascertained. We can only hope, therefore, for something like a fair approximation founded on calculations of the least amount of damage done in the cases which have come under our investigation.

Let us first direct attention to the damage done upon the 133 cases in the period of war, viz., between the years 1793 and 1816.

In estimating this we have to take into the account, the high price of material, the transporting spars and masts to foreign stations, expense of refit on those stations, &c. Now it appears by official documents that in the course of the last war, the lower masts of line-of-battle ships have cost from £800 to £1200 and upwards. That the contracts for spars for top-masts have been so high as £200 each; other spars in proportion.

Taking, therefore, into the account these contingencies, together with the quantity of rigging destroyed, expense of refit, &c., we may safely assume the following average values, as the cost to the country, by the time the different description of masts specified, were effectually replaced, taking one with another, and after making due allowance for the value of the damaged materials, wages, &c.

Line-of-battle Ships.—Lower masts, including rigging, &c.		£1000
	Top-masts, &c.	500
	Top-gallant-masts	20

Frigates	Lower masts	500
	Top-masts	100
	Top-gallant-masts	10
Sloops, &c. . . .	Lower masts	200
	Top-masts	40
	Top-gallant-masts	4

The reconvertible material in the cases of top-masts and top-gallant-masts struck by lightning cannot be considered as an item worth notice, since these have commonly been altogether ruined; hence we have a higher proportionate estimate for these masts.

Applying this estimate to the 133 cases above mentioned, table 2 we have

Liners. —	38 lower masts (about two-thirds of the whole) ruined	£38000
	51 top-masts " "	25000
	45 top-gallant-masts " "	900
Frigates.—	28 lower masts (about two-thirds of the whole) "	14000
	45 top-masts " "	4500
	35 top-gallant-masts " "	350
Sloops, &c.—	10 lower masts " "	1000
	16 top-masts and top-gallant-masts "	700
		£84,450*

If we add to this the expenditure on account of the remaining one-third of the lower masts damaged and other incidental expenses in making good defects, the whole amount would not fall very short of £100,000 upon these 133 cases only, and this would probably on a more severe inquiry be found within the actual loss to the country, since we have included in our basis of calculation, and also in the above estimate, not merely *the first cost of material*, spars, &c., but also *every incidental expense contingent on the refit.*

Between the years 1810 and 1815, the country could not have expended on account of damage done by lightning to the Navy, a sum short of £45,000, or between seven and eight thousand per annum upon the cases which have been traced during that period.

But this is not the only kind of actual loss in money from this source of damage to our fleets, there is besides a sort of negative expenditure to be considered. Thus as observed in some former remarks on this subject.† Supposing a ship were wrecked, yet notwithstanding, this, that all her daily expenses were continued, it is evident that this would be so much money expended in vain. But when a ship of war employed in the service of the country is placed for any given time *hors de combat* by lightning, she may be considered as being for that time of no more use than a vessel wrecked, and if the service on which she is employed be an important or critical one, she must be replaced by another. Now the average expense of a line of battle ship is calculated at £100 per diem, frigates and smaller vessels in proportion. If this

* This estimate it is to be remembered is not given as the mere value of the spars destroyed, but as a fair average expression of the actual cost by the time they were fully replaced, taking into account every incidental item, such as the rigging and sails destroyed, wages, and expense of refit. The high price of spars, and other materials at the time, and the supplying of masts, &c., to ships on Foreign stations, &c.

† Nautical Magazine, September, 1838.

element therefore be considered, the money sunk on account of damage to our Navy by lightning would amount to a very serious sum.

The propriety of this consideration becomes more apparent, when we take into account the great inconvenience and expense attendant on sending ships into British or Foreign ports for refit; as for example in the cases of the Russel, Sultan, Theseus, Ocean, and many others.

When we further reflect on the fact, that by such accidents the national interests may be placed in jeopardy,—that the loss of a ship, of a battle, of a colony, or of a great expedition is involved, we immediately see, that the cost to the country is quite incalculable.

The preceding cases furnish some striking instances of this source of expenditure. Take for example the case of the Glory, 98, disabled just before the meeting of the combined fleets with the British fleet under Admiral Calder; of the Theseus, 74, obliged to leave her station on the blockade of Cape Francois; of the Guerriere, 36, damaged in her masts some time before her action with the large American frigate Constitution, of the Duke 90, in which the main-mast and top-mast were so shivered that the pieces covered the decks, and by which the ship was disabled at the time of the attack on Martinique. Take also several other cases involving similar consequences, as for instance,—the Kent 74, in 1811 off Toulon,—Cumberland, 74, in September 1810,—Repulse, 74, Trident, 64, Lowestoff, 36, Ocean, 98, which with four other line-of-battle ships on the blockade of Toulon, were at once seriously damaged by strokes of lightning on that station. See also the cases of Unité, 44, Resistance, 44, and Ajax, 74, three of our Mediterranean fleet at once damaged in a similar way; and two of the three disabled and obliged to return to port for refit.

In addition to such instances we find whole fleets of merchant shipping inconvenienced and detained; as in the cases of the Norge, Dictator, Thetis, Heron, and Tamar, appointed as convoy.

The number of seamen also killed or severely hurt must be considered as another source of public expenditure on account of lightning, since pensions or provision in some shape is usually granted in such cases.

This discussion of the statistical details, therefore, furnished by the cases of damage to our Navy by lightning during the last war of 1793, clearly shews, first, that the positive loss in about a twenty-three years period of war, on account of material alone, has been at least from £80,000 to £100,000, or from £4,000 to £5,000 annually.

Secondly, that this average annual expenditure, has been very considerably increased by the expense and inconvenience contingent on the loss of the efficient services of our fleets and ships, and by the number of seamen killed or seriously hurt.

Thirdly, that although it is difficult to estimate with any great degree of precision the amount of money sunk on this account, yet taking every thing into the calculation contingent on the refit of a ship, and considering further that only a portion of the cases have been arrived at, the above sum as is well known to those engaged in the Dockyard and Naval establishments, must be at least doubled, and it may be certainly concluded, that during the twenty-three years of war, the country did not expend a sum far short of £10,000 annually, in consequence of damage done to its Navy by lightning.

The second period of peace and which also includes about twenty-three years, will of course be found to involve a far less amount, the price of material and the number of ships at sea, having been greatly reduced. Yet even during this period some very considerable sums will be found to have been expended, and much inconvenience experienced. Thus in the year 1830 on the 2nd of August, the Gloucester and Melville, two line-of-battle ships, were both disabled on going out of Malta after refit, and were both obliged to return and shift their main-masts; and although required for the Mediterranean service at that time, they were both detained until the 7th of September following. Now, this could not have cost the country less than three thousand pounds, since the top-gallant and top-masts were shook in pieces and the main-masts ruined as masts. The Rodney of 90 guns, again in 1838 had her main-mast ruined in a similar way; two men killed, and the ship set on fire, beside other damage. In little more than twelve months, about the years 1839 and 1840, the damage to our ships in the Mediterranean was considerable. At one time three line-of-battle ships, a large frigate, (Madagascar,) and a brig, were, except the last, all disabled. At another two ships of the line, a large frigate in ordinary at Malta, three sloops, and a steamer suffered in a similar way. We had besides about the same year, two large class Revenue cutters, the Hawk and Chichester, employed on our own shores in the service of the Revenue, so terribly damaged that they were literally obliged to leave their stations.

At another time, in 1832, the Southampton of 50 guns, narrowly escaped blowing up in the Downs; and in 1828, two out of five of the squadron at Buenos Ayres for the protection of our South American trade, &c., were so disabled that convoys could not be granted for upwards of six weeks. The Thetis of 46 guns had great difficulty in obtaining a new fore-mast on that station. The expenditure, therefore, even in the period of peace, must have been still considerable, and would not certainly, on a moderate calculation, in the way already given, amount to less than from £20,000 to 25,000 on account of material alone, which increased by other contingencies, would involve, at least, an average annual expenditure of £2,000 per annum on account of damage by lightning, even in the period of peace.

We have not hitherto made any mention of the probability of ships long since given up as lost, having either directly or indirectly suffered by lightning, since it may possibly be objected that, such speculations come too far within the region of conjecture for the purposes of practical deduction. Nevertheless, this question should be not altogether discarded. The cases we have quoted from the logs of H.M. ships sufficiently prove, that there is no kind of damage incidental to the perilous position of a ship on the sea, which may not arise out of the action of lightning, and with which she may not be suddenly and unexpectedly assailed:—we find for instance, examples of ships set on fire, of loss of spars under critical and perilous circumstances, of serious damage to the hulls of vessels below the water line, by all of which a ship is liable to be burned, wrecked, or sunk. Take the case of the Surinam, 18, for example, in which a large piece of the shivered top-mast stove in the deck, and destroyed the cabins beneath, and, in which

the ship narrowly escaped being wrecked on a lee shore; so nearly that they fired signals of distress, threw up rockets and blue lights for assistance. Had such wreck occurred, it is possible that no survivor would have been found to relate the cause of it. The Russel, 74, Squirrel, 28, and several others furnish highly instructive examples of these perilous circumstances.

About the close of the year 1820, a stroke of lightning fell on a French corvette, Le Coquin, in Naples Bay, and struck a hole clear through the bottom immediately below the water line, so that if the boats of the British squadron, then in the bay, had not very actively assisted in cutting her cables and running the ship ashore on the Mole, she would have sunk in deep water, and, perhaps, every one might have perished. Now, had this occurred on a dark night, at sea, far from land, this would have been a missing ship.

In the merchant navy the destruction of shipping by lightning is notorious; within a very few years the merchant ships Tanjore, Poland, Logan, Ruthelia, Bolivar, Boston, Lydia, and Sir Walter Scott, have been all set on fire by lightning, and totally destroyed, together with their rich cargoes. The last named ship was burned, and *actually gone* within an hour after being struck.*

The liability to destruction by fire as a result of electrical discharge, even for a considerable time after its passage through inflammable bad conducting materials, is singularly illustrated in the cases of the Dictator, and of a Portuguese seventy-four—the Principe Real. In both these instances, the fire did not appear until some time after the ships had been struck. In the case of the Dictator two days had elapsed, during which time the heart of the wood had been evidently in a state of inflammation. Hence a vessel may become destroyed by fire in consequence of lightning, after all apprehensive of such a result has subsided.

Supposing then, which is evidently not unreasonable, that some of our missing ships have perished in consequence of lightning, the estimated amount of the loss to the country would evidently be considerably further augmented. This question is of such great importance, that it is a little surprising it should not have engaged the attention of the Committee appointed by the House of Commons to enquire into the various causes of shipwreck.

We shall conclude this discussion of statistical details by a brief reference to the disappearance of H.M. Sloop Peacock, on the Coast of Georgia, in 1814, after a severe storm of lightning, as appears by the log of H.M.S. Lacedemonian. Admiral Jackson who then commanded the Lacedemonian has been so good as to furnish the Author with the following interesting communication relative to the loss of this ship.

In allusion to the fate of the Peacock, he says, "Having had a squadron of H.M. Vessels under my orders in the year 1814, for the purpose of blockading the Coasts of Georgia and Carolina, H.M. Ship Peacock, one of the number was stationed off Wellington.

"On the afternoon of the 15th June, I communicated with the Peacock, and then made sail to the southward. About 11h. P.M., the most

* Annual Register for 1834.

terrific storm of thunder and lightning came on I ever witnessed. It was so truly awful I thought the ship would be destroyed, all hands were sent below, except the officer of the watch, the quarter-master and myself. At 1 A.M. it subsided, and being anxious about the safety of the squadron, I returned off Wellington, but we could see nothing of the Peacock on her station, and as there was no reason why she should have quitted it, I became apprehensive that some accident had occurred to her in the storm of lightning alluded to. We searched the coast for wreck of spars, and other materials, but not a vestige of the ship could be found, nor has information been obtained of her from that day to the present moment. We sent flags of truce on shore on enquiry relative to the vestiges of wreck on the coast, but without any success. God only knows what her fate was, but from the effect of the storm on the Lacedemonian, there is no doubt left on my mind but that the Peacock was destroyed in some way that night by lightning."

I have already pointed out very particularly* the extremely dangerous position of the capstan in many of our eighteen-gun sloops, such as the Peacock; in which we find an iron spindle, five feet long and six inches in diameter, *directly over the after magazine;* and immediately *under the magazine,* again we find the long metallic bolts and fastenings leading through the kelson and keel into the sea, the most awful electrical condition which could be supposed, since the inflammable material is placed in an interrupted current between the detached metallic masses. Such a vessel as the Peacock, therefore, might readily be blown up by a heavy discharge of lightning passing in the direction of the capstan spindle, and would hence disappear, since the small fragments would be quite lost upon the wide waste of the ocean, and soon become dispersed.

(To be concluded in our next.)

The Pendulum Marine Artificial Horizon.—*Invented by A. B. Becher, Commander* R.N.

Among the various desiderata which nautical science has looked for since the grand era in navigation, formed by the invention of reflecting instruments, that of supplying the mariner with an horizon by artificial means, when the horizon of the sea is obscured by fog, or concealed by adjacent land, may be considered as the principal. Accordingly many attempts have been made to produce so important an instrument; and it is rather remarkable that Hadley, the inventor of the quadrant, was among the first to attempt such an appendage to his own invention.

As we do not find, however, that ever since his time, any contrivances for this purpose have been so successful as to fall into use among any moderate portion of our seamen, it is fair to infer that they have been insufficient for the required purpose.

* See Nautical Magazine Feb. 1839.

Assuredly when it is considered how small a space is an arc of a few minutes,—that it is desired to know at the instant of observation the actual place of the zenith, amid the ever varying and incessant motion of a ship at sea, the question is surrounded by difficulties which would appear insuperable, if not sufficient certainly to deter any one, at first sight, from approaching it, however exciting and simple, as well as desirable, such an instrument may be.

The common artificial horizon of mercury or oil, it is true, never fails to supply the place of the natural horizon on shore, except when the object to be observed is so high as to be beyond the limits of the instrument to measure by reflection, or so low as not to be within the limits of observing; within those limits the horizon of mercury never fails; but there are no such limits to the artificial horizon, which it is proposed here to describe. On shore this may be used at all times as a substitute for the mercurial horizon, when that is not available; while at sea, provided the observer has sufficient experience in its use, and the motion of the ship be not too violent, it may also be used as a substitute for the sea horizon.

The most satisfactory mode of introducing the instrument will be, perhaps, to describe the various steps adopted in its construction.

It may be assumed that at the moment of observation of the sun's or moon's altitude with the sextant at sea, the line of the sea horizon forms a horizontal diameter to the field of the telescope, at right angles to the plane of the instrument, in the centre of which the contact is made. All that becomes necessary is, first to supply this line, and then by artificial means so to place it, that it may assume the exact position of the sea horizon. This being once achieved the observer has the power, under any other than extraordinary circumstances, of obtaining his observations at sea, or on shore, independent of any other means.

Setting out with this principle, it was easy to draw a line on a disc of glass, and the mode in which it is adapted for use, as a substitute for the horizon, is as follows:—

It was first determined that the apparatus belonging to the horizon should in no way interfere with the glasses of the sextant, but should be placed beyond the horizon glass, so that this appendage to the sextant, when not required, should leave the instrument free for its own especial purposes.

Accordingly a place was assumed for this line, so as to appear, when seen through the telescope, to be in the middle of the field of view beyond the horizon-glass at right angles to the plane of the instrument. A point was next assumed beyond it, from which a pendulum was suspended, carrying an arm, at the extremity of which is a small slip of metal, which we will call the horizon vane. The upper edge of this vane when made to coincide with the horizon line on the glass, and seen to do so through the telescope, completes the horizon for observation.

To do this it can only be in one position. For if the plane of the sextant be not vertical, an angle will be formed by the horizon vane and horizon line, the former remaining horizontal, from the action of the pendulum, and the latter being inclined to it, as it is fixed to the sextant, and shewing readily that inclination. Again, if the axis of the tele-

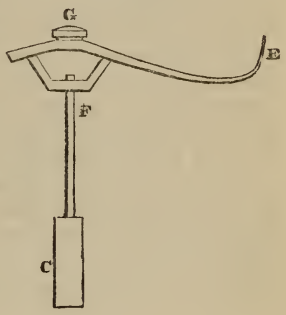
scope be directed either above or below the horizontal plane, the horizon line on the glass disc will be seen either above or below the horizon vane; and, in order that the observer may see when the upper edge of the horizon vane is above the horizon line, a small aperture is made in the middle of it, which much facilitates the observation. Were it not for this aperture the horizon vane would entirely conceal the horizon line when the axis of the telescope is directed below the horizontal plane, thereby bringing the horizon vane above it.

These parts of the horizon were thus arranged in a metal tube, as being the most convenient and portable form for carrying them.

The suspension of the pendulum is thus effected:—a small bridge of metal as in Fig. 1, is fixed across the lower part of the tube,—the lowest part being left open for the pendulum to pass through, and on the middle of the bridge is fixed a strong steel point terminating in a large angle, that it may not easily wear away. The rod of the pendulum is fixed at F, Fig. 2, into a piece of metal containing above it a finely centred agate at G, which is intended to rest and support the pendulum on the steel point above mentioned.

Fig. 1.

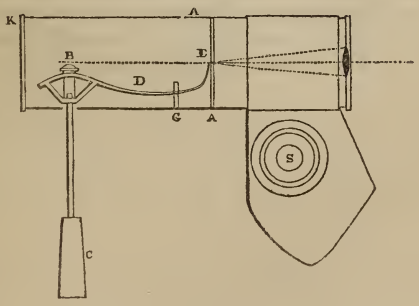
Fig. 2.



In order to keep the arm of the pendulum, in the line of the axis of the tube, it is crossed by an angular-shaped piece of metal, which is fixed to the sides of the tube, so that as it rises to the line of the axis, it must assume its direction. The piece of metal is placed at G in the tube, Fig. 3.

The glass disc with the horizon line is placed at A in the tube represented in Fig. 3. From a point B in it the pendulum C is suspended, carrying the arm D, bearing the horizon vane E, in the upper edge of which is the aperture above alluded to, its upper edge being made at right angles to the rod of the pendulum.

Fig. 3.



The end of the tube which is intended to be placed next to the horizon glass of the sextant, is closed with a lens, the focus of which is a point midway between the horizon line on the glass disc, and the horizon vane on the arm of the pendulum; these two parts being necessarily placed as close together as will allow the vane to move freely without touching the disc. By this arrangement they are both so near the focus that distinct vision is obtained, the aperture in the horizon vane is considerably magnified, and the whole reduced to parallel rays, so that a powerful direct telescope made for the purpose can be used with great advantage to the observer.

The further end of the tube, containing the horizon, is closed by a piece of ground glass, and a sliding screen at K is also attached to this end to regulate the light passing into the tube. When the sun is low, this is required, as an unnecessary degree of light then enters the tube, and interferes with the observation.

The foregoing Fig. 3, shews the arrangement of the various parts of the horizon, when ready to be attached to the frame of the sextant by means of the plate to which the tube is secured; and it is so fixed that when the pendulum is at rest, the upper edge of the vane E and the horizon line on the disc, are made to coincide with each other, in the plane of the longer axis of the telescope when in a horizontal position. The angle C B E formed by the horizon vane and the pendulum rod is a right angle, B E being horizontal, and B C vertical, and being by construction a constant angle, B C can only coincide with the axis of the telescope when it is in the horizontal plane.

Thus one of the conditions necessary for observation, namely, that of placing the longer axis of the telescope horizontal is attained. In observation it will be found that the upper edge of the horizon vane E, if not coinciding with the horizon line in the disc, will be seen either above it, or below it, across the aperture.

The other condition of the sextant for observation, namely, that its plane be vertical, is also obtained by the horizon vane. For the pendulum being supported on a point is free to move in all directions, and the edge of the horizon vane being at right angles to the pendulum rod must be at right angles to the plane of the sextant, when the pendulum rod is hanging parallel to it. If the plane of the sextant be not vertical, the pendulum remaining vertical, the edge of the horizon vane, and the horizon line on the disc will make an angle with each other. The observer then has to make the edge of the horizon vane and the horizon line coincide exactly with each other, when they will appear as in Fig. 4. At the same time he is to make the contact of the sun's lower limb upon the latter appearing as in Fig. 5.

Fig. 4.

Fig. 5.

It will be evident from the foregoing description of the instrument that, the observer having to form his own horizon at the instant of observation on board ship, should place himself in that part of the vessel where there is the least motion, and especially to be screened from the wind. He may be seated or not at pleasure, but he will find that he has more control over the instrument when the hand, by which it is held, is supported by some convenient part of the vessel, or if he be seated, the elbow is rested on the knee. If observing on shore, he must also take special care to be screened from the wind.

The tube thus fitted with the horizon, when this is required for use, is attached to the frame of the sextant outside of the horizon glass, (two feet in the plate of the tube sliding into holes in the frame,) and is held firmly to it by means of a screw, which always remains in the frame of the sextant or of the horizon for that purpose; and neither the horizon nor anything belonging to it interferes in any way with the sextant for its ordinary use.

But the exceeding delicacy of suspension of the pendulum, still rendered it necessary to overcome the tremulous motion conveyed to it by holding it only in the hand, this alone being quite sufficient to unfit it for observation without the motion of a ship. The difficulty was at once overcome by simply immersing the pendulum in a vessel of oil, which leaves it perfectly free to move in any direction, and yet to preserve that of gravity; while it quite annihilates all tremulous movement, and gives the observer at once a complete command over his instrument. The vessel or cistern H, Fig. 6, containing it, is attached to the sextant, and is represented in its place with the pendulum immersed. And in order that the oil may not be lost when the arc of the sextant is held upwards for reading off the observation, another cistern is attached to it in an inverted position to receive it. The oil then flows from one into the other, according to the position of the instrument, the observer not troubling himself at all about it, only taking care never to hold the sextant with its face downwards, which no careful person ever does.

Thus provided with its own horizon the sextant becomes ready for use, independent of the sea horizon, in observing the altitude of the sun or moon by day. But it was still desirable, if possible, to render it equally so at night, when the more tranquil state of the weather, from the violence of the wind having subsided, affords so many more favorable opportunities for obtaining the latitude by the moon and bright stars. This was readily effected by placing a small lamp L, at the outer extremity of the tube, so as to illuminate the parts of the horizon; and it is so fitted that when the instrument is held up for reading off it will preserve its vertical position. This lamp will also serve for reading off the observation by taking it from its place. When the light of the lamp is too strong it may be subdued, so as not to overpower the ray of the star on the horizon glass of the sextant, by placing a small circular paper screen inside the glass cap which covers its lens.

A leaning staff to serve as a point of support for the observer to steady his hand on, when holding the instrument in observation, has been added to the case containing the sextant and horizon. It is fitted

in joints, and may be so adapted that the observer may be either standing or sitting, according as may be considered most convenient for observation.

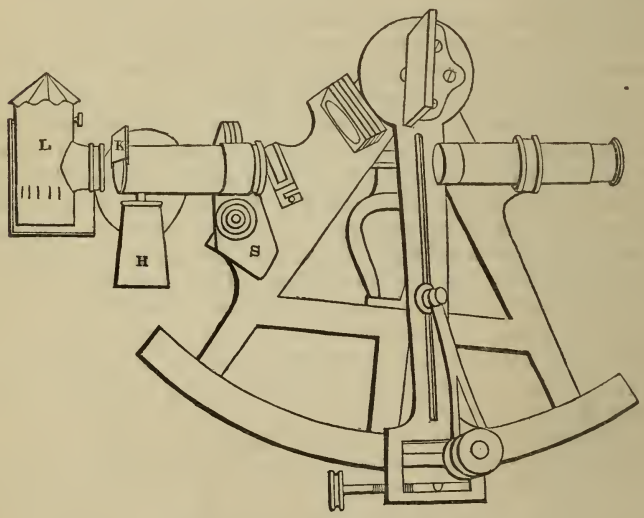
Thus the horizon is rendered as distinctly visible by night as by day, and equally available for observing altitudes of the planets, or bright stars, by night, as for observing the altitude of the sun or moon by day.

The whole apparatus of the horizon when not required for use, is contained in a small case, with oil for the pendulum and lamp; the former resting on a bed of raw cotton.

The following is a representation of the instrument, with the lamp attached for night observation.

The observer should not attempt *to use the instrument afloat before he is proficient in its use on shore.*

Fig. 6.



Directions for using the Horizon.

1. Unscrew the cover of the small conical cistern H, without removing it from its case, and see that the surface of the oil in it is rather higher than the aperture of the inverted cistern, into which the oil is to flow, when holding the instrument up to read off. Olive oil is used. Leave the cistern in its place.

2. Take the sextant from its case, and having adjusted the telescope to distinct vision, screw it into the collar. A direct telescope, giving a large field, is fitted to the sextant, for day observation with the horizon; but at sea, when there is much motion, one of less magnify power may be used. At night, when observing a star, the ordinary telescope of the sextant, or the inverting one, may be used; as the loss of light in the former may render the star indistinct by reflection.

3. Fix the tube containing the horizon in its place on the sextant at the back of the horizon glass, the feet at the back of the plate being inserted in their sockets in the sextant frame, and secure it there by means of the screw S ; it is also fitted so as to slide into its place in the frame of the sextant. Raise the sliding screen at the further end of the tube to a proper height so as to admit a sufficient degree of light up the tube.

4. Hook the cistern H in its place at the side of the tube, previously immersing the pendulum in the oil which it contains. Be careful that the pendulum be previously allowed to shake about as little as possible.

5. If at night, and the lamp be required, five threads being used for the wick, if the light be too strong it may be subdued by placing a screen of paper or two, if necessary, inside the glass cap, which may be unscrewed for the purpose. The light of the lamp may also be reduced by the sliding screen at the end of the tube, as a greater degree of shade may be necessary in bringing down the moon or star, than afterwards for observation. The lamp being ready, slide its leg into its place at the back of the inverted cistern. The lamp will then hang in its proper place for the observation, and on holding up the arc of the sextant to read off, will preserve its vertical position.

The front of the sextant should never be inclined downward while the horizon with its cistern is attached, as in that case, the oil will be lost from it.

It has been considered that a staff may assist in steadying the instrument thus:—

And to some it has been fitted, but others again do not think it necessary. The observer, therefore, will follow his own inclination in using it or not.

(To be continued.)

The Loss of the Brig Colina.

Central Criminal Court, *April* 17.—Mr. Justice Maule took his seat on the bench at ten o'clock, and William Read was placed at the bar charged by the indictment, "That he on the —— did incite and procure one William Simpson, feloniously and maliciously to cast away and destroy a certain vessel called the Colina, on the high sea, within the jurisdiction of the Admiralty of England, and also of the Central Criminal Court, with intent to prejudice divers persons as part owners of or underwriters to the said vessel." There were several other counts in the indictment, in one of which the master of the vessel (Simpson) was named as the principal in the felony.

The prisoner pleaded "Not guilty."

Mr. Sergeant Shea (with whom was Mr. Doane) appeared for the defence, and Mr. Clarkson (with whom was Mr. C. Jones) opened the case for the prosecution at very great length, stating the principal facts to be detailed in evidence, and remarking on the conduct of the two principal witnesses in the case. At the conclusion of this opening, which occupied an hour and a half, Mr. C. Jones called

Mr. Frederick Secretary, superintendent of the Marine Alliance Insurance Company: He stated that the business of the company was carried on at Ipswich by an agent. In the month of July, 1840, an insurance was effected by the company on the brig Colina, for the sum of 1,250*l.* The insurance was effected on the 20th of July, for the term of twelve months, by order of Read and Page. At that time the chairman of the company was Mr. John Irving. He has always been chairman, from the institution of the company. In the year following application was made on the policy for a total loss. This application was made on the 17th of July. There was some hesitation on the part of the company with regard to the payment of the insurance. The names of the parties affixed to the policy produced are in the writing of the parties themselves.

Richard Dykes Alexander, examined by Mr. Clarkson: I was formerly a partner in the bank of Alexander and Co., at Ipswich. I have since retired from it, and am now an agent for the Marine Alliance Insurance Company. I was their agent in the year 1840. I had then left the Bank, though I still kept an account there. The firm of Read and Page also kept an account there. In consequence of instructions I received from the company, I gave directions to George Pooley, a clerk in the bank, to transfer the sum of 1,248*l.* 12s. 6d. from my account to the credit of the firm of Read and Page, The prisoner applied himself to have that sum paid.

By Mr. Serjeant Shea: I can't say exactly when Read first applied to me. I received the instructions to pay the money by letter from London.

Mr. Clarkson: I am ready to produce that letter, if it is required.

George Pooley, examined by Mr. Clarkson: I am clerk in the bank of Alexander and Co., at Ipswich. In August, 1841, the firm of Read and Page kept an account at the house. In August, 1841, in consequence of instructions I received from Mr. Alexander, I transferred from his (Mr. Alexander's) account to that of Read and Page the sum of 1,248*l.* 12s. 6d.

By Mr. Serjeant Shea: The account kept by Read and Page was a joint account, and drawn by a joint check.

William Henry Ross, examined by Mr. C. Jones: I produce an official copy of the register of the Colina. The names mentioned in the register as owners are William Read and Enoch Page. Can't say if Read therein-mentioned is Read the prisoner.

Charles Tovell, examined by Mr. Clarkson; I am a shipowner, and live at Misley, in Essex. I know the prisoner Read. I was once the owner of the brig Colina. I sold her to the firm of Read and Page in May 1840. She went in part payment of a vessel called the Seaflower, which they were building

at my order. I believe they allowed me from 750*l.* to 800*l.* for the Colina. When she was delivered to Read and Page she was rather an old vessel. She was of American build, and was in rather tight condition. The parchment produced is the bill of sale of the Colina.

Mr. Sergeant Shea: Look at the bill of sale and see if you did not part with the Colina for more than 750*l.*

Witness: Yes I see that it is 900*l.* She was worth from 950*l.* to 1,000*l.* to sell. She did not want repair. Twelve years is not a very great age for a ship. I cannot say what wood she was built of, but it was not oak. The firm of Read and Page is a very extensive one.

By Mr. Clarkson: They are in the habit of building new ships and taking old ones in part payment. I cannot say whether the sum mentioned in the bill of sale as the price of the Colina is the sum I received or was allowed for her.

The bill of sale was then read, and it appeared from it that the sale was effected on the 1st May, 1840. The vessel was built in 1821, at Prince Edward's Island.

Thomas Ross: I am an auctioneer at Ipswich. In July, 1840, I was employed by the prisoner to put up the brig Colina for sale. I put her up on the 14th of July. I had previously received a note, signed by a person named Gardner, to keep a reserve bidding of 950*l.* No sum of that amount was offered for her by the bidders at the auction. If such sum had been offered she would have been sold.

By Mr. Sergeant Shea: I can't say I received all my instructions from Gardner relative to the auction. I had often before sold ships for the firm. They were both new and old.

John Brady, examined by Mr. C. Jones: I am a mariner, residing in Barking, in Essex. My business is the Cod fishing. In the month of June, 1841, I had the command of a smack called the Sarah, and I went in her to the coast of Holland. I was off that coast in company with some other smacks. I was lying off the Brown Bank on the eastern edge. There were about eight other smacks lying off the same place. About six o'clock one morning I was roused out of my berth by the watch, and I immediately went on deck, and my attention was directed to a brig which was in sight. This brig I afterwards found to be the Colina. She was about six miles off, and appeared to have been deserted by her crew, and to be in distress. Her canvas was only three parts set, and there was no signal of distress hoisted. The wind at that time was south-west, and the weather fine. I called all hands and made towards the ship. I neared her very soon, and was about half a mile distant when she went down. I then took up the crew who were in the long-boat. They had been taken on board a Dutch galliot, which they left to come on board of my vessel. The crew had some of their clothes with them. The vessel was about three hours in sight before she went down, which she did head foremost. From her appearance she seemed to be a very good vessel. I put the crew on board the John Bull steamer, which was bound for London. There were six hands besides the master. They had no provisions on board. The crew did not appear fatigued, as if they had been at work. They seemed quite fresh. I sent the boat up to London. Mr. Simpson made me a present of the boat when he went on board the John Bull steamer. I believe, from the state of the weather and the wind, that if it had not been deserted, the ship could have been got ashore and saved. The sails were disposed in such a manner as not to assist the ship in any way. She was then about 36 miles from land. There was a favourable breeze blowing at the time.

Re-examined by Mr. Doane: She was on the eastern edge of the Brown bank. The Texel was the nearest port as the wind was then blowing. I myself was about 44 or 46 miles from land on the previous day. The vessel was about two-thirds of the bank from the south end on the eastern side. The weather was not very hazy that morning, but it was a little so. I had turned into my berth at about 3 o'clock on the morning the vessel sank. There was a good breeze

all night. I have lost a vessel belonging to my employers within the last two months. She ran into a sunken vessel and sunk almost directly. I circulated a report that the vessel first caught fire, and while the fire was being extinguished she ran upon the sunken vessel.

By Mr. Justice Maule: The report about the fire was not true. I only did it to break the matter to my employer before I got home. The vessel was the Sarah. She struck the sunken vessel in the night, and during a gale. There was no buoy over the ship. I have a certain share in the cargo. I lost this, my clothes, and my wages; and I have not been employed since. The vessel was not insured at all. I had eight hands on board. These facts were questioned by my owner, but they confirmed my story. She sank in 11 fathoms water.

William J. Smith: I was off the Brown bank on the coast of Holland, on the morning the Colina was lost. She was lost on Thursday morning, I was called from my berth between five and six o'clock, and saw a vessel with her sails clewed up, and lying in a very curious position. She was six or seven miles off. There was but little wind at the time, and the weather was very fine. A vessel bound for any port would, on such a morning, have crowded all sails, but the sails were so placed as to act against each other, and keep the vessel motionless. I could not make out what she was about, as there was no signal of distress hoisted. I looked at her with a glass. There was a fishing smack called the Gem amongst the other smacks. This smack was the fastest vessel of the whole, and she put off her boats towards the strange sail. The sea was quite smooth at the time. Just as the boats of the Gem arrived at the quarter of the Colina she suddenly sank, bows foremast. A boat had been put off from the Colina, and made for the Gem, but it changed its course and went on board the Sarah. The crew appeared quite fresh, and did not appear as if they had been working at the pumps. They had very little clothes with them. In consequence of what I saw I entertained some suspicions. When I came home I found out the name of the owner, and I wrote to him about the circumstance. The letter produced is the same:—

"Barking, Essex, June 29, 1841.

"Sir.—I conceive it a duty to the public and the fishery at large to acquaint you, as being the owner of the brig Colina, of Ipswich, which was sunk off the coast of Holland some short time since, that I intend to acquaint the insurance company that I can produce sufficient evidence that the brig was sunk purposely. I am well acquainted with all the circumstances of the case, and merely inform you of the fact before legal proceedings are commenced, that you may institute proper inquiries respecting it. Advice has been had on the subject, and legal gentlemen say, that it is as strong a case as the Dryad, so recently reported in the papers. I shall wait your answer by return of post. If I do not receive an answer by Friday morning, I shall immediately commence.

"I am, yours respectfully,

"Anchor Inn, 9 o'clock, Tuesday morning, "William Smith, Jun.

"Mr. Read, Shipbuilder, Ipswich, Suffolk."

I received an answer, which my father opened and read. It was destroyed. I read the letter. It was from a person named Cobbs. It stated that the charge I had made was a grave one, and that if I could not fully substantiate it I should be called on to answer it. I heard nothing further, and I did not write to the Marine Alliance Insurance Company.

By Mr. Sergeant Shea: I do not think the Colina was 60 miles from the Texel. At the time I observed the sails clewed up the hands were not on board. When a vessel was in a dangerous state, it would be the duty of the master on such a day as that on which the Colina sank to make for the nearest port. I never wrote to the Insurance Company. I wrote to Read because I thought there was some foul play. The sunken vessel is in the way of the fishery, and many nets have been lost in consequence. I did not write to the Company, because my father desired me not to do so. I do not know what legal gentleman

said that the case was as strong a one as the case of the Dryad. I do not know that any legal gentleman gave such an opinion. I did not expect any money from Mr. Read. I was formerly in the employment of a Mr. Roslyn, a timber merchant, who charged me with embezzlement, and sent me from his service. I was then 15 years of age. The sum I was charged with taking was 2*l.* or 3*l.*

By Mr. Clarkson: I was never taken before a magistrate or prosecuted. After I left Mr Roslyn I went to the fishery. I went from the fishery to the Duchess of Kent steam-boat.

Three other mariners were then called, and their evidence was confirmatory of the statements of the last two witnesses.

George Gardiner sworn: I was clerk to Messrs. Read and Page, by whom the brig Colina was purchased. She went one voyage to the West of England, and afterwards she went to Newcastle, from which she left for Rotterdam with a cargo of coals. I was in the counting-house when a Mr. Taylor entered the place and said he had good news for Mr. Read. He then read from the paper an account of the loss of the Colina. Read said that he knew she would be lost, for Mr. Simpson had promised him that he would sink her. He also said that it was a very fortunate thing, and that when he saw Mr. Simpson he would ask him how it occurred. I saw Read a few days after in the counting-house. I believe Mr. Page was there. Mr. Simpson had arrived, and Read was speaking to him about a letter he had received from Barking relative to the loss of the Colina. Read questioned the master about his conduct to the men on board the smacks, and asked him if he had been careful not to commit himself. Simpson said that he had been very cautious. Read then asked him if he had been drinking, and when he left the vessel, and he said that he had not, that it was all right. Read then said that he would take the letter to Mr. Cobbs, his solicitor, to answer. Soon after I heard this conversation I met the master in the counting-house, and he communicated to me the many circumstances about the loss of the Colina. I informed Read of what Simpson had told me in about three weeks after. The master said that the ship had to his knowledge been wilfully cast away. About five days after this I saw Read and the master in the counting house again; Read asked him what reports he had been making about the loss of the Colina? Mr. Simpson smiled knowingly upon Read, and shook his head. When Mr. Simpson was gone, Read said, "Simpson and I have been speaking of the loss of the vessel, and we have come to the understanding, so that he intends to say nothing more about it." Read also said that he would give him another vessel. The firm of Read and Page then owned the Argo, and Read gave Mr. Simpson a written authority to go on board the Argo. Simpson appeared always very unhappy about the whole affair.

By Mr. Doane: I have been in the service of Page and Read seven years. Before that I kept a village school. I was reared a mechanic. When these conversations took place we were all in the same counting-house. I will not swear that no one else was there. There was no one else present during these conversations, certainly not to my knowledge. Read read Smith's letter aloud. There were people coming in and going out at the time. Simpson had been formerly in command of the Ranger, but he was dismissed in 1842. He was appointed to the Argo in June last. During the interval of his dismissal from the Ranger and his appointment to the Argo he was out of employment.

Captain William Simpson was then brought from Newgate, and placed in the box. He said, I first entered the employment of Read in 1840, and when he purchased the Colina I was put in command of her. She was a leaky vessel. I made one voyage in her, and found her so leaky that I was compelled to mention it to Mr. Read, who had her put into his shipyard and repaired. He remarked to me that it was a pity I did not sink her; and I replied if she had sunk we should all have gone down with her, because the boats were not seaworthy. I was then going to London with a cargo of pipe-clay, and Read desired me to purchase a new long boat out of the money I should receive for the cargo. He afterwards asked which would be the best

voyage in which to sink the ship, and I said I thought the Rotterdam voyage the best. I then took the ship to Newcastle, and took in a cargo of coals. As soon as the cargo was stowed, we sailed for Rotterdam. When the ship had reached the Brown Bank, on the night of Wednesday, I went down into my cabin and bored two holes in the side of the ship with a trenail auger. I pierced the planks which line the ship, and then the outer planks. I then plugged the two holes in the lining planks, so that the water should not spout into the cabin. I then called the mate, and told him that the ship had sprung a leak, and directed his attention to the noise made by the water entering. The pumps were not set to work, nor were the sails set. We got out the boat at one o'clock, and at about nine were picked up by one of the fishing smacks in the neighbourhood.

(To be continued.)

Nautical Notices.

The Cockle Gat Light.

[The chart of Yarmouth Road to which the following letter refers, was published at the Hydrographic Office of the Admiralty, on the 25th of December, 1843, at the low price of 6d. on purpose to put it within reach of every collier and coasting vessel; the result has been that in less than three months it has got into general circulation, and upwards of a thousand copies of it have been sold.—Ed. N.M.]

H.M.S. Blazer, Yarmouth Road, Dec. 16, 1843.

Sir.—In compliance with your orders, issued immediately on receiving notice of a new Cockle light, being about to be placed, to make a fresh survey of the Cockle Gat, and the approaches to Yarmouth Road, I have now the honor to forward to you a chart on the of scale two inches to a mile, nearly, containing the result of that examination which has been begun and completed by Lieut. Cudlip and Mr. E. K. Calver, master, Assistant-Surveyors of this ship, during the past three weeks.

The changes in the sandbanks in this vicinity, since the date of the last survey, have been material; but, before entering upon this point, perhaps, I may be allowed to express my extreme gratification at the placing of the Cockle light-vessel, by the Corporation of the Trinity, whereby this intricate navigation has been rendered comparatively safe, and the greatest thoroughfare for shipping on the face of the globe has been made available by night as well as by day.

In order to understand more clearly the changes effected by the tides and currents in the sandbanks which line this coast, from Winterton on the north to Lowestoft Ness on the south, and render Yarmouth the finest roadstead in the kingdom, it is necessary to refer to former charts; the oldest* I can find that has any pretension to be called a chart (for it is hardly worth while to go back to the year 1008, when the site of the town of Yarmouth is said, but erroneously, to have first become inhabited ground, or to 1580 when the Scroby Sand was a grass-covered island,) is that of Greenville Collins, made in 1682, but this gives no feature to them that can be depended upon. Very little better is that of

* The only two old charts in the British Museum relating to this part of the coast are:—1st, A coloured plan or bird's eye view of the town and harbour of Great Yarmouth; drawn *temp.* Henry VIII, on two sheets of vellum, measuring 4 feet 8 inches by 1 foot 11 inches.—[*Cott. Aug.* 1, i. 74.]

2nd. A coloured chart of the Coast of Suffolk, from Orwell Haven to Gorlestone, near Yarmouth, with the several forts and beacons erected thereon, drawn on vellum, *temp.* Henry VIII., on two sheets, measuring together 7 feet by 43 inches.—[*Cott. Aug.* 1, i. 58.

Fotheringhame, made in 1804, and the only point of comparison to be found in this is, that he represents the shoal, called the Sea Heads, as almost dry, on which Collins had marked two fathoms; we then come to Capt. Hewett's survey of 1827, which appears to have embraced the whole of Yarmouth Road, and the outlying sands, and the later one of 1834, which only reached as far north as the north Scroby buoy, leaving untouched the Cockle Gat, and it is by comparison with these two last charts that we are best able to estimate the changes that have taken place.

Beginning then to the northward we find the Cockle and its southern extension the Barber Sand considerably lowered; nearly half a mile in length of the northern point, within the former four fathom line has deepened from 3½ to 5 and 6 fathoms, and a swatchway of fifteen feet has opened just to the southward of the dry part of the Barber; but the chief alteration, and one that if it go forward bids fair to improve this entrance very materially, is a deep gully which the spring ebb tides, probably increased by a southerly gale, appear to have scooped out between the Cockle Hook and S.W. buoys, forming now a channel with 6 and 7 fathoms, where in the year 1827 there was only 2 and 3 fathoms water.

On the eastern side of the entrance is the shoal, called the Sea Heads, (and in old charts, the Dog's Head,) this, on which Collins in 1685 shews 2 fathoms, in 1804 Fotheringhame marks almost dry, and Capt. Hewett in 1827 found 9 feet, has now in no part less than 4½ or 5 fathoms, and the very uneven ground to the northward where in 1827 were patches of 3 and 4 fathoms is now one general flat of 6 and 7 fathoms.

But where the sea has moderately gained on these points, the sand has alarmingly gained at the northern tongue of the Scroby, which now projects half across the old deep water Gat, so that in some places we have only 12 feet, where in 1827, or, perhaps, as late as 1834, there were 8 fathoms; while the 4 fathom edge has extended itself into a former depth of 10 fathoms three-quarters of a mile to the northward of the spot it occupied in 1836. This has materially contracted the channel, and vessels coming up with a flood tide must be careful to hug the edge of the Cockle Sand, in order to avoid this danger. The western face of the Scroby, generally, has become straighter, and the point of the sand called the Scroby Fork has disappeared; but the south end of the sand has more than compensated for this, by extending itself half a mile to the southward, and at the spot over which was a deep water channel of 8 fathoms in 1834, is now a dangerous shoal of less than 12 feet.

The southern end of the Cross Sand in the same manner has extended nearly half a mile to the south-west, and the form of the sand has most materially altered since 1827, which seems to be the date of the latest survey of this shoal; a swatchway of 5 fathoms now divides the sand into two nearly equal parts in the middle; the features of the shoal, known by the name of the Flat of the Newarp, are also materially changed, the shoal spots of 2 and 3 fathoms have disappeared, and the least water on it now is 6 or 7 fathoms.

On the 'Kettle Bottom' Sand also the water has deepened from 9 to 15 feet, and the channel, called Hewett's Channel (after the accomplished surveyor whose name longer than any other will be connected with the survey of the North Sea,) which in 1834 or earlier broke out through the southern part of the Scroby, is now become both wider and straighter.

A 3 fathom channel full half a mile wide has also opened out in a N.N.W. direction between the Corton and Holm Sands.

It would be curious to speculate on these various and extensive changes in which vast bodies of sand, from 40 to 50 feet in depth, have, in some places, been scooped out and carried away, or in others transported full half a mile from their former positions, but we have not sufficient data for the purpose, it would require an examination at least every year, and a complete survey every five years, (instead of only one in sixteen years,) to arrive at any tolerable result.

The chief changes which for the present affect the interests of navigation

are, the growing out of the tongue of the Scroby, and the opening out of a swatchway through the Barber Sand, the former of these is well buoyed off, but, on a flood tide still requires great vigilance on the part of the mariner ; the latter, by moving up the Outer Barber buoy might be made available to ships wishing to pass through Hemesby Hole at low water, (when the passage close along Caistor beach is hardly safe). By keeping Caistor north mill just open to the northward of the cottages on the sand hills, bearing about north-west, ships may safely pass through, carrying 15 feet at low water springs.

Since the placing of the Cockle light, the system of lights and buoys, (three of the former and thirty of the latter,) which mark out the three channels into Yarmouth Road, is so perfect that no further remark is necessary : one caution only is absolutely requisite, namely, that vessels, in coming up by night, should steer S.S.E., towards the Cockle light, and never bring her to the northward of a N.E. ½ N. bearing, in running from her into Yarmouth Road.

I am, &c.,

To Capt Beaufort, Hydrographer. John Washington, *Captain.*

P.S.—Lowestoft Road would be equally well lighted and buoyed, if the Stamford light-vessel were removed one-third of a mile farther south, on to the northern point of the Newcome sand.

St. John River, *East Florida.*—The light-house lies in the lat. of 30° 12′ N., and long. 81° 34′ W. Notice is hereby given, that the outer buoy lies N.E. b. N., two miles and a half from the light-house, in 16 feet water outside the bar, the middle buoy half mile lies S.b.W. from the outer buoy, in 10 feet water; and S.b.W. half a mile distant lies the inner buoy ; you steer for the light-house, half a mile distant, then your course is W.b.N. for the river. There is from 10 to 13 feet on the bar at high water, and about 6 feet at low water. It is high water on the full and change of the moon, at half-past seven o'clock. The buoys are soar buoys, and can be seen three or four miles. Vessels bound in have to wait for the tide, or becalmed, can anchor in 5 fathoms good bottom.

January 27th, 1844. James Dell, *Chairman.*

Tides off the Seven Stones.

Observations on the Tides at full and Change for the Month of March and April, 1842.

March, Saturday 12th.—At 10h. 30m. A.M. low water, the tide making a west stream ; the tide keeps working round with the sun the first two hours flood, till it comes to make a north-east stream, then it runs, north-east four hours and a half. High water 4h. 30m. P.M , the tide making an east stream ; the tide keeps working round with the sun the first quarter ebb till it comes to make a south-west stream, then it runs south-west four hours and a half; the vessel has kept working round with the tide ; slackens a little before high and low water, there is no dead slack spring tides.

Saturday 26th, full moon.—High water 4h. 30m. P.M., low water 10h. 30m. P.M. ; no dead slack spring tides; the tides slack a little before high and low water; the tide runs four hours and a half north-east with the flood, and four hours and a half with the ebb ; the vessel keeps working round with the tide, except with very strong winds.

(The above observations were made by the mate, George Kegarthen.)

Sunday, April 18th, change of moon.—At 10h. 30m. A.M. low water ; 4h. 30m. P.M. high water at three hours after low water, the flood runs N.E. ½ N., till

one hour before high water, when it works round to east, running in that direction till high water; one hour after high water the ebb runs S.W. ½ S., till one hour before low water, when it works round to west, and continues in that direction till low water; no dead slack.

Sunday, 24th, full moon,—It being remarkably fine, made the following observation on the tides.

Seven Stones,—Observations on the Tides, 24th and 25th April, 1843.

Sets of the Tides:	The exact time at which the Tide comes to the different points of the compass.	Sets of the Tides.	The exact time at which the Tide comes to each point of the compass.
West stream ceased	H.W. 9 45 A.M.	W.b.N.	10 6 P.M.
W.b.N.	9 50	W.N.W.	10 15
W.N.W.	10 5	N.W.b.W.	10 25
N.W.b.W.	10 15	N.W.	10 45
N.W.	10 33	N.W.b.N.	11 —
N.W.b.N.	10 47	N.N.W.	11 10
N.N.W.	11	N.b.W.	11 25
N.b.W.	11 15	North	11 45
North	11 35	N.b.E.	12 —
N.b.E.	12	25th, N.N.E.	13 A.M.
N.N.E.	15 P.M.	N.E.b.N.	50
N.E.b.N.	— 38	N.E.	2 30
N.E.	3 15	N.E.b.E.	3 20
N.E.b.E.	3 44	E.N.E.	3 45
E.N.E.	4 6	E.b.N.	4 17
E.b.N.	4 12	East	4 34
East	4 21	East stream ceased	H.W. 4 45
East stream ceased	H.W. 4 24	E.b.S.	5 3
E.b.S.	4 28	E.S.E.	5 6
E.S.E.	4 30	S.E.b.E.	5 8
S.E.b.E.	4 33	S.E.	5 10
S.E.	4 36	S.E.b.S.	5 18
S.E.b.S.	4 55	S.S.E.	5 20
S.S.E.	4 57	S.b.E.	5 30
S.b.E.	5 2	South	5 32
South	5 12	S.b.W.	5 34
S.b.W.	5 14	S.S.W.	5 36
S.S.W.	5 15	S.W.b.S.	8 21
S.W.b.S.	5 17	S.W.	8 51
S.W.	8 15	S.W.b.W.	9 25
S.W.b.W.	8 40	W.S.W.	9 54
W.S.W.	8 55	W.b.S.	10 25
W.b.S.	9 30	West	10 30
West	9 45	West stream ceased	H.W. 10 40
West stream ceased.	H.W. 10—		

The above observations were taken for mean time.

R. Simmons, *Master.*

Isle of May Leading Light.—The Commissioners of the Northern Light-houses hereby give notice, that, in connection with the present light on the Isle of May, a light-house has been erected, as a guide for the North Carr Rock, and that the light thereof will be exhibited on the night of the 15th April, and every night thereafter, from sun-set till sun-rise.

The following is a specification of the appearance of the leading light and the position of the light-house, by Mr. Alan Stevenson, Engineer to the Commissioners:—

The leading light is fixed, and of the natural appearance, and is placed on a tower about 130 feet below the level of the present light, and to the N.E.b.N. of it. The lights will be seen distinctly separate, the one above the other; and when in one line, they bear S.W.b.S. ¼ S., and N.E.b.N. ¼ N., and lead about half a mile to the eastward of the North Carr Rock. The lights must on no account be opened to the westward.

And the Commissioners hereby further give notice, that by virtue of a warrant from the Queen in Council, of date the 4th March, 1844, the following Tolls will be levied in respect of this light, and of the Beacon on the North Carr Rock, viz:—

1. On all vessels which shall pass to or from the westward of a line drawn from Buttonness, in the County of Forfar, to Fifeness, in the County of Fife;—

2. On all vessels to or from the northward, which shall pass to or from the westward of a line drawn from Fifeness to Whitberryness, in the County of Haddington;—

For vessels in the coasting trade, being	under 100 tons,	2d. per vessel.
	100 and under 200 tons,	4d.
	200 tons and upwards,	6d.

For British vessels bound to or from ports beyond the seas, and for Foreign vessels privileged under treaties between her Majesty and the States to which they belong, bound to or from Foreign ports, navigating as aforesaid, *twopence*, in addition to the above specified rates respectively.

For Foreign vessels not so privileged, double the respective rates payable by Foreign privileged vessels.

Provided always, that the said tolls should be payable once only for the whole voyage, although in such passage the vessels shall cross both the lines above mentioned.

By order of the Board,

C. Cuningham, } *Joint Secretaries.*
A. Cuningham, }

Edinburgh, 11th Mar., 1844.

Trinity-house, London, 29th March, 1844.

Hunstanton Light.—Notice is hereby given, that in compliance with the request of persons using the navigation of Lynn Well, this Corporation has caused the light exhibited in the Hunstanton light-house, to be coloured Red, in the direction of the shoal, called the Roaring Middle; and masters of vessels and other persons navigating the said Well, are to observe that the Hunstanston light will now appear of a Bright Red colour, when bearing between E.S.E. and S.E.b.E.

By Order, J. Herbert, *Secretary.*

Trinity-house, London, April, 15th, 1844.

Burnham Lights,—*Bristol Channel.*—The Gore Sand at the entrance of the Perrot or Bridgewater River, having gradually extended itself in a southerly direction, masters of vessels, pilots, and other persons, are hereby required to observe that the two lights at Burnham when kept in line, will *no longer* lead them up clear of the said Sand, called the Gore.

In order to preserve the deepest water when approaching the channel of the said river from Seaward, it is essentially necessary that the High light should be kept about three times the breadth of it's Tower, open to the southward of the Low light,—and so continued until the Flatholm light has opened to the eastward of the Steep Holm Island,—when the two lights at Burnham may be brought in line, and the High light gradually opened to the northward of the Low light, to clear the Stert and Lark Sands.

The depth of water having decreased at the buoy of the Gore Sand, the said buoy will be moved so far in a south-westerly direction as to be in line with the two Light-houses at Burnham, by which alteration persons in charge of vessels will be enabled, in hazy weather when the marks cannot be distinctly seen, to steer their course for the channel of the river, immediately after they have passed the buoy at a moderate distance to the southward thereof.

By Order. J. Herbert, *Secretary.*

Trinity-house, London, April 17th, 1844.

Light near the Cork Ledge,—*off Harwich Harbour.*—Notice is hereby given, that in compliance with the request of the merchants, shipowners, masters of vessels, and other persons interested in the Navigation of the East Coast of England, this Corporation has caused a Floating Light-vessel to be prepared for the purpose of exhibiting a light near to the Cork Ledge, off Harwich Harbour;—and mariners are to observe that a bright *Revolving* Light will be exhibited on board the same on the evening of Wednesday, the 1st of May next,—and thenceforth continued every night from sun-set to sun-rise.

This Light-vessel, which has been already moored at her Station, lies in 4½ fathoms at Low water spring tides, and with the following marks and Compass bearings, viz:—

The S.W. Land well open of Harwich Naze	S.W.b.W. ½ W.
Walton Mortella Tower, just open north of the east Mortella Tower,	N.W. ¾ N.
Harwich High Light-house	N.W. ¾ W.
Platter's Buoy	N.W.b.W. ½ W.
Andrew's Buoy,	W.b.N. ½ N.
Inner Ridge Buoy	W. ¾ N.
Rough Buoy,	S.E. ¼ E.
Cutler Buoy,	E.N.E.

N.B. The Cork Ledge Buoy will be continued at its usual Station until the exhibition of the Light on the 1st May aforesaid,—after which it will be taken away.

By Order, J. Herbert, *Secretary.*

Light at Brindisi, *Adriatic.*—The Neapolitan Government has given notice that, a light has been established at the entrance of the port of Brindisi, on the Forte di Mare. It is in latitude 40° 39′ 21″ N., and longitude 18° 0′ 27″ E., and being elevated 106 feet above the level of the sea, may be seen at the distance of about seven leagues.

Ichaboe Island.—*The Guano Trade.*

On referring to Captain Owen's chart of the southern coast of Africa, it will be seen that there is a portion of it between the latitudes of 26° 21′ and 25° 21′ unsurveyed. In the southern part of it is situated the island, called by the

natives Ichaboe, of which the annexed is a sketch in lat. 26° 18′ S., and long. 14° 58′ E., and which is covered with the manure called Guano. This article has given rise to a considerable trade, and Mr. Wade, master of the Douglas of London, one of the earliest vessels which went there, and by whom the sketch was made, was elected harbour-master, and apportioner of the claims of the various vessels which subsequently arrived, by the unanimous voice of the traders then present.

In the month of December last there were twenty ships in the harbour or road, formed between the island and the main land, besides a dozen more in search of the island. The roadstead is stated to be tolerably secure, the climate healthy, and the natives on the coast very few and very poor. The island is about a mile in circumference, and is stated to be covered with Guano to the depth of thirty feet.

The island is stated to be formed of granite, slate-stone, and quartz. The covering of Guano, between the outlines is damp, having been washed over by the sea; that inside of it is dry. Ships bound there should make the high land of Angra Pequeña, and taking advantage of the wind and current sail along shore, keeping a moderate distance from the land, perhaps about three or four miles.

We recommend them also to consult Commander Matson's letter, on making passages on the coast, in our *February* number, p. 105.

The Guano Trade.—A sailor coming from Liverpool to Preston, who has been with a vessel for Guano, states it to be a most lucrative speculation. He said that the vessel was ten weeks on her passage to Africa, nine weeks returning, and seven lading. The article itself, he states, costs not a farthing. The vessel carried 500 tons, which, at £8 per ton, would make £4000. The expenses he thought, would not exceed £500; but if we call them £1000, the importation of Guano is not a bad speculation.

[Since the above was in type, we have received permission to insert the following.]

The West Coast of Africa and Islands adjacent, *where Guano may probably be found, with remarks for Mercantile adventures in these parts.—By Andrew Livingston, late Master Mariner.**

Between Gariep or Orange Piver in lat. 28° 28½′† S., and long. 16° 22½′ E., and Angras Juntas, the coast is barren and sandy near the sea, but eight or nine miles inland there are hills, and further on mountains on each side of the river, where there are some Hottentot villages, the inhabitants of which have herds of cattle, and flocks of sheep.

Orange river, although of great length, is nearly closed at its entrance, from which the sea is shoal four or five miles to the westward, and breaks there near the times of full moon, and change, when a heavy swell rolls in from the westward. Some gold dust has been found in the vicinity of the mouth of the river, while precious stones and minerals are *said* to abound thereabout. Copper and lead ores are stated to have been met with.

Six or seven leagues in the interior are fine plains with plenty of excellent cattle, which may be had cheap, for gunpowder; and ostrich feathers, &c., may also be procured in barter.

To have intercourse with the natives it is necessary to land at Voltas Bay, and walk to Orange river, as there is no landing at or near its mouth in any season, on account of the surf, which is always heavy.

* Now Teacher of Navigation, Nautical Astronomy, and subjects therewith connected, at 105, Duke Street, Liverpool.

† Captain Owen places its entrance in 28° 30′.

The shore from Orange river runs very clean and straight about N.N.W. (true.) There is no island, or harbour at Angras Juntas, but a bight in the land runs in a mile or so to the eastward and is a mile and a half "or thereby" wide at the entrance; affording tolerable shelter to vessels from the southerly winds.

This is a favourable place for opening a communication with the Hottentots, some of whom reside five or six miles to the north-east of the bay, at the entrance of which are fourteen fathoms water, shoaling gradually to five fathoms on sandy ground, half a mile from the easternmost part of the bay, but the best anchorage is about a quarter of a mile from the south-west point in six fathoms on sand. A small rock stands to the south-west of the south point, with deep water all round it.

The latitude of this place is 27° 47′ S., and long. 15° 50′ E.

Whale Bay in latitude 27° 23′ S., is unsafe from its shallow water, but vessels may anchor outside of two small islets, which lie nearly half a mile from the shore, and on them are at times some fur-seals, and *probably* Guano. The landing on the south side of the bay is good, and there is a Hotentot village, three or four leagues inland where the inhabitants have sheep, cattle, ostrich feathers, &c., to dispose of on favourable terms.

The shore hereabouts is sandy, but there are some hills of a volcanic appearance near it.

Possession Island lies in front of Elizabeth Bay, and the middle of it is in lat. 26° 57′ S., and long. 15° 08′ E. Between Cape Voltas (the position of which does not seem satisfactorily ascertained,) and Possession Island are some reefs and islets estimated to be half a mile off shore, but there are no dangers a mile distant from the land; and if necessary vessels may anchor four or five miles from the shore in from fourteen to twenty fathoms water, on a sandy bottom, along the whole distance.

Possession Island is stated to be three miles long and rather less than one mile wide. On its east side is a bight, in which there is excellent anchorage in from seven to four fathoms, on sand and in smooth water. There are fine fish to be caught here, and fur-seals frequent the island, on which Guano is understood to be abundant. There are some sunken rocks about three-quarters of a mile off the south point of the island, on which the sea usually breaks, and a reef runs about three miles from the north-east part of the island, on which the breakers are often very heavy; but as both reefs bend to the eastward they tend to shelter the harbour and make the water in it smooth.

Between the easternmost points of the reefs and the main land the passage is deemed to be three miles wide, with from ten to fifteen fathoms water on a sandy bottom and clear from danger. Ships bound to this place with southerly winds, (which frequently prevail hereabouts) should enter the anchorage by the south channel, and leave it by the northern one.

Angra Pequeña lies nearly six leagues to the northward of Possession Island, and its south point is in lat. 26° 39′ S., and long. 15° 07′ E. There was a marble cross upon it erected by the Portuguese about three centuries and a half ago, and remained until some modern Vandals threw it down not many years since.

Nearly four miles to the eastward of the Cross Point is Angra Point, half a mile from which bearing north-east (true) is a rocky reef, and between it and the point is a passage of four or five fathoms water, but it is safest for vessels to pass a good half mile to the northward of the reef, after rounding which, a lagoon will open, which runs in four or five miles to the southward. The entrance of this lagoon "or bay" is one and a half mile wide, with seven fathoms water in the middle, gradually shallowing to the head of the lagoon on both sides. One league up this bay are four fathoms on a muddy bottom, and at this place is the best anchorage a quarter of a mile from the western shore.

E.b.N. (true) two miles from Angra Point are two small islands at a mile

from the mainland, and lying nearly north and south, called the Penguin Islands. Neither of them exceeds a mile in length. Inside of the southern island is good anchorage in five fathoms water on a clayey bottom, about four hundred fathoms from the east side of, and near the middle of the island. Care must however, be taken to avoid a rock almost level with the water and lying half a mile to the north of the passage.

A vessel may enter this harbour either to the northward or southward of the island; but the southern passage is the preferable one, and is clear of danger at a quarter of a cable's length from either shore. A brig is understood to have loaded a full cargo of guano here not long since, but of an inferior quality to the Peruvian guano.

There are stated to be some rocks inside of the northern island, which render the anchorage unsafe between it and the mainland.

Fur-seals have been plentiful on these islands, on which are immense quantities of sea-fowl, the eggs of which may be procured in abundance at the proper season. The islands seem of volcanic origin.

To the north-east of Angra Pequeña, minerals are said to abound, and there are ostriches, sheep, cattle, porcupines, baboons, monkeys, elephants, &c.

Hides, skins, ivory, and ostrich feathers may be procured from the natives on very low terms, in barter.

Ten or twelve miles north of Angra Pequeña and at a mile or a little more from the shore, are springs of excellent fresh water, although it is generally asserted that there is no fresh water along all this coast. There are usually some Hottentot families near the springs.

A shoal lies N.N.W., (true) from Angra Pequeña five leagues distant, and this is the only danger, lying more than four miles from the shore, as far to the northward as Spencer's Bay.

Nearly half way between Possession Island and Angra Pequeña, at a mile from the shore are some rocks, with good anchorage inside of them in five fathoms, sandy bottom. To sail into this anchorage keep round the rocks on the starboard hand at fifty or sixty fathoms distance, and then steering to the southward, anchor opposite the middle of the reef and half way between it and the mainland. These rocks are a resort of fur-seals, and it is likely there may be guano upon them.

Ichaboe island is in lat. 26° 24′ S., and long. 14° 47′ E. It is scarcely a mile in circumference, and lies twenty-four miles to the northward and westward of Angra Pequeña, and scarcely half a league from the mainland. It is covered with guano about twenty-five or thirty feet in depth, almost to the waters' edge.

The landing place is on the north-east part of the island; but, after heavy gales with much swell outside, there is frequently such a surf for about twenty yards from the shore, as to make it difficult, and, even dangerous for a boat to land.

A point of land runs out three or four miles from the mainland to the southward of the island, and, from the extremity of this point a reef extends to the north-west, true, until it nearly meets another projecting from the west side of the island, from which a reef also runs out to the north-east, half a mile nearly, and thus a bay is formed in which a vessel may lie in perfect safety, and in smooth water at all seasons, in five fathoms water, at two cables' lengths from the shore, and there are three fathoms almost close to the rocks.

The south passage is narrow, and often breaks quite across, therefore, a vessel ought to enter this anchorage by the northern passage, observing to give the north east part of the island a berth of half a mile, which will be enough to avoid all danger from the reef, and the shore of the mainland may be approached as near as two cables' lengths.

There are often many *right* whales about these reefs. Scale fish may be taken with hook and line, and cray-fish may be caught with a hoop-net, all

round the island, within one hundred yards of the shore. Multitudes of penguins and gannets frequent the island, and many fur-seals have been taken off it by American sealers.

The south-east part of the bay on the continent opposite the island is only four miles from a Hottentot village, and the springs of fresh water before mentioned. In the interior are herds of cattle and flocks of sheep. Leopard skins, grey fox skins, ivory, and ostrich feathers, with other valuable articles may be procured by barter.

An excellent bay, not laid down in any chart, was lately discovered by the Gallovidia schooner, R. Rae, master, who states its latitude (as rather doubtfully ascertained by stars,) to be 26° 08′ S. It affords shelter from north-east to south-west, with good holding ground on blue mud and sand. It is about two and a half miles wide and three deep, and in honor of the discoverer may be appropriately named Rae's bay.

Mercury island is in lat. 25° 42′ S., and long. 14° 58′ E. It is a mile in circumference, and three-quarters of a mile from the south-west point of Spencer's bay, and one mile and a half from the north-east point of that bay. Both passages are easy to take and perfectly clear.

The best anchorage is on the east side of the island, one and a half cable's length from its shore in five fathoms, on a bottom of sand and clay. Near the full and change of the moon a heavy swell often sets into the south part of the bay, and renders it there unsafe for anchorage; and at times heavy rollers, such as those frequently experienced at Tristan d'Acunha, St. Helena, and Ascension come on suddenly, and attended with much danger to boats. An American sealer lost one of her men through the unexpected rise of these rollers, when a boat's crew were ashore engaged in skinning seals they had killed.

Whales frequent this place very often, and there can be little doubt that like Ichaboe, Mercury is stocked with guano. The south point of Spencer's bay has several high rocky peaks, rising nearly six hundred feet, almost perpendicularly from the waters' edge.

Hallam's Bird island is only judged to be a quarter of a mile in circuit, and stands in lat. 24° 38′ N., and long 14° 22′ E., nine miles from the mainland. A rocky reef runs off from it in a south-west direction, on which the sea often breaks with great violence.

A ship may anchor on the north side of the island in ten fathoms.

There are fur-seals, gannets, and penguins on the island, and without doubt plenty of guano.

Excellent fish may be caught here with hook and line, and a few turtle may occasionally be met with on a small sandy beach on the east side of the island.

In July and August numbers of *right* whales frequent the reef.

All the islands enumerated, and more particularly the last seems decidedly of igneous or volcanic formation.

No rain is ever known to fall on the part of the coast already mentioned, and the air is so pure and dry that an American has stated he dried a quarter of beef, hung up at the mainstay, so as to be perfectly sweet without any salt.

Probably there is not a more salubrious climate in the world, than within the limits already described.

The things most to be dreaded by vessels on this coast are:—

First. The haze, which sometimes causes the shore to appear at a very considerable distance, when at the same time she may be too close in for safety; but as the soundings are regular all along, a prudent attention to the lead, ought to be a sufficient safeguard against this danger.

Second. A heavy swell which mostly sets in from the westward, for which allowance should be made, and an anchor ought always to be kept ready to let go in case of necessity.

Third. The winds and currents are most frequently from the southward, and therefore, a vessel should always make the land to the southward of her place of destination.

Fourth. As it is believed part of this coast has never been carefully surveyed, a navigator should not put too much faith in charts, but exercise a most vigilant look-out.

It seems strange that whales have been so long known to frequent this coast, that the fishery of them has never attracted the attention of British Shipowners, while there is no year in which enterprising Americans are not reaping a rich harvest from this profitable pursuit.

Birds' manure may also be found on Alcatras Island in lat. 10° 37′ N., and long. 15° 26½ W., and on the Pennedo de San Pedro, in lat. 0° 55′ N., and long. 29° 30′ W., but as both these places are subject to heavy squalls of wind and deluges of rain, probably its fertilizing qualities (even if it is the same as Guano) would undoubtedly be much deteriorated.

On Ascension Island there is some birds' dung, supposed principally to be that of birds named "wide-awakes", but it is not known that it has hitherto been tried as a manure.

At St. Helena, the late Governor Beatson, made some tolerably successful experiments with birds' dung as a manure.

Guano has by many been supposed to be a volcanic product, by others to be a compound of some volcanic matter and birds' dung, and by others as consisting entirely of birds' dung; which latter idea seems nearly confirmed by the analysis of that eminent chemist Dr. Andrew Ure.

Guano has, however, always been found in places of apparently volcanic formation, but the following extracted, and in some measure abridged, from the late Captain Boteler's, (R.N.,) account of Captain Owen's (R.N.,) Surveys, vol. 2, p. 33, &c., may not be uninteresting.

"Latham's Island is situated in lat. 6° 54′ 02″ E., and long. 40° 0′. It consists of coral. Is of an oval form and about one thousand feet long, it rises ten or twelve feet above the level of the sea, and is accessible only on the south-west where there is a small shelving space of coral sand.

"The surface is as flat as a bowling green, and is entirely formed of the dung of the numerous sea-fowl that resort thither. In some places this incrustation over the interstices of the coral rock below, was not of sufficient stability to resist the weight of a man, as two or three of our men experienced.

"The bank of soundings on which this island is situate, is very extensive to the northward; but approaches close to it in the opposite direction. Small vessels may traverse every part of it in safety, but on the north-east are spots a cable's length from the island with only three fathoms.

"Making the island at night would be dangerous, and from its slight elevation it could not be distinguished until close to it."

Genuine guano as already stated has (it is believed) never been found except on places seemingly of volcanic origin, and almost always in situations where gannets, penquins, and seals are in the habit of resorting.

It is much to be desired that some spirited gentlemen should despatch a small vessel and procure a cargo of genuine birds' dung from Latham's coral Island, to compare with genuine guano. The risk could be but little if divided into shares, and the probability is that the cargo would pay all expenses, and perhaps even afford some profit.

The space on the west coast of Africa from Orange river to Hallam's Bird Island, lies between the British and Portuguese possessions in Southern Africa, and is claimed by no nation, and consequently any adventurer may have Guano for the taking.

Some persons in Liverpool, it is said, allege that they have purchased the sovereignty of the Guano Islands, but as there are no human inhabitants upon them, and the natives of the adjacent continent (who are described as civil and harmless,) have neither boat nor canoe, the "*soi disant*" Sovereigns must have contracted with a King Penguin, had the contract stamped by a Fur-Seal, and witnessed by the requisite number of Gannets.

It is reported the adventurers have sold a cargo of guano recently imported

from Angra Pequeña so as to realize about eight hundred pounds, on a cargo of a little more than two hundred tons.

Persons having vessels unemployed, might employ them to advantage in this trade, which will become still more profitable should the Peruvian Government prohibit the exportation of guano from their islands; as it has more than once been reported they propose to do.—*Liverpool, July* 20, 1843.

Liverpool, 24th April, 1844.

Sir.—An article on the subject of African Guano having been pointed out to me, in the *Glasgow Examiner* of the 20th instant, copied from the *Glasgow Herald*, it professes to give an account of the mode in which the existence of Guano on the coast of Africa was made known.

Now, I think it hard that, while an impulse has been given to the employment of shipping, greater than the opening of the India or China trade by any means did; while one of the greatest boons has been bestowed on agriculturists entirely through me, that I should not only be deprived of a share of the advantages accruing therefrom, but actually be compelled to see all the credit attributed to some other person.

To set my own claims on a sure footing I yesterday applied to Mr. John Rae, junior, Broker, South Castle Street here, who at once gave me a Certificate, of which, the following is a copy:—

"I have every reason to believe, that no person in Britain knew of the existence of Guano on the South-West Coast of Africa, except Mr. Andrew Livingston, of 105, Duke Street, Liverpool, who communicated it to my father Mr. John Rae, from whom it was *somehow or other* obtained by my elder brother, Mr. James Rae, by whom it was subsequently communicated to others.

"Captain Farr, I am aware, received his information through my brother, and those connected with him in chartering the Ann of Bristol."

(Signed) "John Rae.

"Witnessed by Charles Isrie, Surgeon,
"13, Slater Street, Liverpool, 23rd April, 1344."

Some gentlemen engaged in the Guano trade have suggested a subscription in my favor, and while so many are reaping a rich harvest, entirely by my means, I may fain hope they may considerately bestow on me some little acknowledgment.

Perhaps the Editor of the *Nautical Magazine*, may be so kind as in some way or other to advocate my claims.

I remain, &c.,

To the Editor, &c. Andrew Livingston.

[We received the above at so late an hour as to leave neither time nor room for comment.—Ed. N.M.]

Coast-Guard.—At a special general meeting of the members of Lloyd's this week, the following vote was proposed and unanimously passed, viz,—"*5l.* to three Coast-guard men and pilot for saving the survivors of the crew of the sloop *Ruby*, of Aberdeen, wrecked near Wick, during a gale on the 24th of February."

New Books.

Narrative of the Voyages and Services of the Nemesis, from 1840 to 1843; *and of the Combined Naval and Military Operations in China; comprising a Complete Account of the Colony of Hong-Kong, and Remarks on the Character and Habits of the Chinese.—From Notes of Commander W. H. Hall,*

R.N., ; *with Personal Observations by W. D. Bernard, Esq.*, A.M., *Oxon ;* 2 *vols.*, 8vo.—London : H. Colburn.

The Nemesis has reached us at so late an hour that we must content ourselves at present, with merely announcing the appearance of its two portly volumes, promising our readers an overhaul in our future numbers. Her services, we have recorded in the official despatches, and those too, we may add, in prose and verse ; but the numerous little incidents which contribute so much interest to great events, and which bring us present, as it were, to the scene of action, we shall endeavour to cull, hereafter, from the volumes before us. They are enriched with plates, and that open-hearted friend a good track chart.

The Chinese War ; *an Account of all the operations of the British Forces from the Commencement to the Treaty of Nanking.—By Lieut. J. Ouchterlony, F.G.S. of the Madras Engineers ; late Acting-Engineer at the New Settlement of Hong-Kong. With Fifty-three illustrations, from Original Drawings by the Author.*—London : Saunders and Otley.

We must content ourselves with recommending this valuable work to our readers for the present, rich as they will find it in description, both by letter and illustration.

Fifty Days on board a Slave Vessel in the Mozambique Channel in April and May, 1843.—*By the Rev. Pasco Grenfell Hill, Chaplain of HM.S. Cleopatra.*—London ; Murray.

"Abounding in incidents, anecdotes, and observations fresh from the fountain-head of slavery ; and enriched with facts which shew the *improved* condition of the trade," might have been added to the foregoing title. We may possibly treat our readers to some of them in our next.

The English Review, *or, Quarterly Journal of Ecclesiastical and General Literature.—No.* 1, *April*, 1844.—Rivington, St. Paul's Church Yard, and Waterloo Place.

In these days of change and innovation, we also, of the Nautical School, can see with regret, the ill effects of that restless spirit of man in Ecclesiastical matters ; and can hail with satisfaction, even a Quarterly work of the right kind, and recommend it to those who would desire to see such ill effects exposed to their amendment. The work promises well. The first article on the Templars is rich, and they all savour strongly of what is wanted.

The Naval Regulations.

The first of April, 1844, ushered into H.M. Service the above all-important work,—that which is to form the Oracle of Britain's fleet, and serve as the index of right and wrong to her gallant sons of the wave. As one of the chief novelties it contains, we place the following before our readers, promising another in a future number.

Duelling in the Navy.—The following order is in the new Admiralty instructions, in reference to this matter :—

1. Every officer serving on board any ship or vessel of her Majesty's fleet is hereby positively ordered neither to send nor accept a challenge to fight a duel with any other person of the fleet.

2. Every officer of the fleet, on becoming privy to any intention of other officers to fight a duel, or having reason to believe that such is likely to occur, owing to circumstances that have come under his observation or knowledge, is hereby ordered to take every measure within his power to prevent such duel, having recourse, if necessary, to the Captain or Commanding officer.

3. Every officer of the fleet is hereby ordered in no manner or degree to evince dissatisfaction with or upbraid another officer for refusing or not sending a challenge, and all officers are strictly enjoined neither to reject, nor advise the rejection of, a

reasonable proposition for the honourable adjustment of differences that may have unhappily occurred.

4. Any officer of the fleet who may be called on to act as second or friend to an officer intending to fight a duel, is to consider it to be his imperative duty, and he is hereby ordered, strenuously to exert himself to effect an adjustment between the adverse parties, on terms consistent with the honour of each; and should he fail, owing to the determination of the offended parties not to accept honourable terms of accommodation, he must refer to the second paragraph of this order.

5. As obedience to order is the essential and governing principle of the naval service, those officers may rest assured of the support and approbation of the Admiralty, who, having had the misfortune of giving offence to, or having injured or insulted others, shall frankly explain, apologise, or offer redress for the same, or who, having had the misfortune of receiving offence, injury, or insult from another, shall cordially accept frank explanation, apology, or redress for the same, or who, if such explanation, apology, or redress, are refused to be made or accepted, shall submit the matter to be dealt with by the Captain or Commanding officer of the ship or fleet; and every officer who shall act as hereinbefore directed, and consequently refuse to accept a challenge, will be deemed to have acted honourably, and to have evinced a requisite obedience not only to this order, but also to the pleasure of the Queen.

Naval Intelligence.

(From the Portsmouth Herald.)

Cape of Good Hope.—The *Rattlesnake*, troop ship, with invalids and troops from China, arrived on the 19th of February. *Pilot*, 16, Capt. Jervis, arrived on the 21st January, and left again on the 28th, on her way to China.

Rio Janeiro.—The *Frolic*, 16, sloop, Capt. Willis, sailed on the 17th February, for Demerara, with one of her prizes and captured negroes. *Curacoa*, 26, Capt. Sir T. Pasley, Bart., left on the 28th of January for Monte Video, where the *Alfred*, 50, Com. Purvis, *Daphne*, 18, Capt. Onslow, and the *Gorgon*, steam-sloop, Capt. Hotham, were lying on the 23rd of January; *Racer*, 16, Com. Reed, and *Ardent*, steam-sloop, Com. Russell, were at the River Plate; *Growler*, steam-sloop, Com. Buckle, was at Bahia; *Dolphin*, 3, Lieut. Com. Hoare, at Santos; *Spider*, 6, packet-brig, Lieut. Com. Pym, while making the inner roads of Monte Video, on the 21st of January got aground, but soon floated off without damage.

Malta, April 5.—*Distribution of the Mediterranean Squadron.*—At Malta—the *Queen*, 110, bearing the flag of Vice Admiral Sir E. W. C. R. Owen, the commander in chief; *Ceylon*, receiving ship, bearing the flag of Rear Admiral Sir L. Curtis, second in command and superintendent of Malta Dockyard; *Tyne*, 28, *Devastation* and *Medea* war steamers, and *Beacon* surveying vessel; at Gibraltar, the *Locust*, steam tender; at Barcelona, the *Scout*, 18; at Marseilles, the *Acheron*, steam packet; at Naples, the *Vesuvius*, war steamer; at Tunis, the *Belvidera*, 38, *Geyser*, war steamer, and *Polyphemus*, steam packet; at Corfu, *L'Aigle*, 24, and *Orestes*, 18. On her way thence to Malta, the *Alecto*, steam packet. At the Piræus of Athens, the *Formidable*, 84, *Savage*, 10, and *Virago*, war steamer; at the Bay of Salamis, the *Indus*, 78; at the mouth of the river Xanthus, the *Warspite*, 50; cruising in the Archipelago, the *Snake*, 16; and at Constantinople, the *Hecla*, war steamer.—The *Medea* was admitted to pratique yesterday, and immediately hauled alongside the *Queen*, to transfer to this latter the Lycean marbles, for conveyance to England, so that we may presume the *Formidable* may shortly be looked for from Athens to receive the commander in chief's flag. The *Indus*, *Medea*, and *Vesuvius* will all leave for England before many weeks.

The *Thames*, convict ship, Mr. Bradshaw, Master of the *Ocean*, Acting-Mas-

ter, embarks about 300 convicts for conveyance to Bermuda, where she is to be stationed as a depôt.

The *Pantaloon*, 10, Lieut. Lapidge, arrived from Devonport, and will be paid off at this port. She is a very fine brig, and was formerly the property of the Duke of Portland.

She brings intelligence from Africa, that the *Soudan*, steam-vessel, on proceeding up the Sierra Leone River, with some detachments of troops on board, got aground, and they were unable to get her off; the *Prompt*, schooner, has been condemned as unfit for further service.

The *Bonetta*, surveying brig, Com. Brock, will be at Spithead in a few days from Chatham, on her way to the Mediterranean.

The *Iris*, corvette, Capt. Mundy, sailed from Funchal roads, Madeira, on the 24th of February, for the Cape of Good Hope, Singapore, and Hong Kong, to join the squadron under Rear Admiral Sir T. Cochrane.

The *Malabar*, 72, Capt. Sir G. Sartorius, Knt., was in the river Tagus, with the *Albion*, 92, Capt. Lockyer, on the 6th inst. The former ship arrived on the 3rd, having had eight days passage; she was to sail in a few days to Plymouth, to be paid off.

The *Princess Royal*, transport, Lieut. Harris, Agent, has passed by the Isle of Wight, from the eastward, bound to Rio de Janeiro with supplies for the squadron.

The *Helena*, 16, Com. Sir C. Rickets, Bart., left Port Royal harbour, Jamaica, on the 24th February, to join Rear Admiral, the Hon. J. Percy's squadron, at the Cape of Good Hope, on which station she was to remain.

The *Centurion*, 80, is ordered to be launched at Pembroke on the 2nd May.

The *Styx*, surveying sloop, Captain Vidal, sustained some damage from a collision with the Lauriana, of Plymouth, and a schooner, on her voyage to the Azores. She touched at St. Michael's on the 31st March.

The *Albatross*, 16, Captain Yorke, arrived at Halifax on the 2nd of April, from Jamaica and Bermuda, with specie for the Commissariat. She experienced a heavy gale on her passage from Bermuda, in which she lost some of her boats. She sailed on the 5th for Bermuda and the Coast of Africa.

The *Devonshire*, line-of-battle ship, of 72 guns, and built in 1812, is ordered to be cut down to a first class frigate.

The *Bittern*, Capt. Peel arrived at the Mauritius Jan. 16th, from the Cape of Good Hope.

The *Tartarus*, steam-vessel, Commander Wolfe, is about to commence a survey of Bantry Bay.

The *America*, 50, Capt. Hon. —Gordon, fitting at Devonport, it is said will not be ready for sea until the second week of next month.

The *Flying Fish*, 12, was floated out of dock, at Pembroke, on Monday afternoon, and was to have left for Portsmouth on Tuesday morning, in charge of Mr. Brown, the assistant master attendant of the latter port.

The *Collingwood*, 80, fitting at this port, for the Pacific, will be ready by the end of this month for commissioning.

In Harbour.—*St. Vincent*, *Victory*, *Excellent*, *Victoria* and *Albert*, *Pantaloon*, *Echo*, and *Fearless*, steamers.

In Dock.—*Prince Regent*, *Rodney*, *Scourge*, (building), and *Lily*.

At Spithead.—*Thames*, *Nautilus*.

Devonport, April 18.—The *Lively* lighter arrived from Pembroke on Friday, with stores for the Dockyard.

The *Petrel* packet, 6, Lieut. T. Crozer, Commander, was paid wages on Saturday, and sailed the following day for Falmouth, to take out the next mail to the Brazils.

The *Vernon*, 50, Capt. W. Walpole appeared off this port on Monday, made her number, and proceeded down channel for Cork.

The *Linnet* packet, 6, Lieut. H. P. Dicken, Commander, arrived yesterday from Falmouth.

In Harbour—*San Josef*, *America*, and *Confiance*.
In the Sound.—*Caledonia* and *Larne*,
Sheerness, April 18.—The *Ganges*, 84, was undocked this morning, having undergone a thorough repair and refit.
In Harbour.—*Camperdown*, *Ocean*, *Africaine*, and *Raven*.
In Dock.—*Boscawan*, *Æolus*, *Amazon*, and *Cygnet*.
In Basin.—*Ganges*, *Vulture*, *Chichester*, and *Crocodile*.

Launch of the Boscawen at Woolwich.—On April 3rd, the launch of the Boscawen took place before a large concourse of spectators, and a still larger, it is said, arrived too late to witness it. The circumstance of the tide having been accelerated half an hour earlier than it was foretold, occasioned this disappointment. The ship was named with the usual ceremony by the Countess of Haddington, and in a few seconds she was afloat. The following are given as her dimensions:—Length on the gun-deck, 180 feet; length on the keel for tonnage, 146 feet 9⅜ inches; breadth extreme, 54 feet; breadth for tonnage, 53 feet; breadth moulded, 52 feet 6 inches; depth in hold, 24 feet; burthen in tons, old measure, 2213 81-94; burthen in tons, new measure, 1911 2931-3500.

In connection with the launch of this noble ship, we cannot help noticing the rapid progress which Lieutenant Rodger's Small Palmed Anchor is making in the Royal Navy. We foresaw from the first, that time only, was necessary to ensure its being preferred to the old Large Palmed Anchor; and backed by the testimony of experienced seamen, who have used it under trying circumstances, and whose opinions we have recorded, we have always recommended its general adoption. We were therefore gratified on finding that the Boscawen was brought up, for the first time, with one of the Small Palmed Anchors, weighing only 29½ cwt.; and as the launch took place more than half an hour before high water, and the spring flood was then running rapidly, our Nautical readers will at once perceive that the holding qualities of the anchor must have been severely tested, as it was let go the moment the ship had cleared her slip.

On being weighed, it was found to have completely buried itself in the mud, without dragging a foot from its original position; and the circumstance being subsequently adverted to, Mr. Tinmouth, the Master Attendant, declared it to be in his opinion, the best anchor ever made. It has already been upwards of ten years in very general use in merchant ships, and is daily becoming more general in the Royal Navy. With such a recommendation then as the above, the high character of Lieut. Rodger's anchor may be considered as fully established; Mr. Tinmouth being well known as a practical seaman, whose opinions derive additional value from his acknowledged scientific attainments, which enable him to investigate mechanical subjects theoretically as well as practically. Having long since recorded our own opinion of this valuable invention, when its merits were comparatively but little known, it is with great satisfaction we find our views confirmed by so competent an authority as that of the talented Master Attendant of Woolwich Yard.

The French Navy in Commission.

(*From the Naval and Military Gazette.*)

France.—*The French Navy.*—The following list of French men-of-war on active service, together with their stations, is from the Government *Etat General de la Marine* for this year, and published last month:—

Levant.—Line-of-battle ship Marengo, 80 guns: frigate—Andromede, 52,

corvettes—Creole, 24; Deligente, 16. Brigs—Alcibaide, 20; Fléche, 10. Steamers—Ramier, 150 horse-power; Castor, 120 ditto.

Toulon.—(Squadron of Evolutions).—Line-of-battle-ships—Ocean, 120 guns; Jemmapes, 100; Inflexible, 90; Suffren, 90; Jupiter, 86; Alger, 82; Neptune, 80. Frigates—Belle Poule, 60. Steamers—Asmodée, 450 horse-power; Infernal, 450 horse-power.

West Indies and Gulf of Mexico.—Frigate Nereide, 52; corvette Brilliante, 24; brigs Genie, 20; Griffon, 20; Mercure, 20; Euryale, 16, Papillion, 10.

Wrecks of British Shipping.

(Continued from p. 246.—cs. crew saved—d. drowned.)

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Ada	141	———	Curnow	Cardiff	Penzance	C. Cornwall	April 2, cs
Ayrshire		Greenock	Barker	Mobile	Liverpool	Hanover Sd.	Mar. 1, cs
Bridget		———	Timmins	St John	———	abandoned	Feb. cs
Caroline		Liverpool	———	Liverpool	Africa	Studwell R.	Mar. 13,cd
Catherine	150	Whitehaven	———	———	———	Studwell	Mar. 19
Eliz. James		———	———	———	———	Coombana B	Nov. 4
Elizabeth		———	Hawke	Cephalonia	Leith	C. de Gatt	Feb. 27, cd
Fancy		———	Longford	Leghorn	Dublin	C. de Gatt	Feb. 27, cs
Halifax		Halifax	———	———	———	———	———
I. Dennistoun	155	Greenock	Young	Liverpool	Mobile	C. St Antono	Feb. 2, cs
Jane Walker		———	Gillies	St. John	Liverpool	abandoned	Jan. 27, cs
Lewisham		———	Stead	Whitby	Baltic	Thisted	Mar. 14,
Lune		Ulverstone	Priest -	Greenock	GlassonLock	foundered	Mar. 10, cs
Matilda		———	Dawson	Valparaiso	B. Ayres	Chiloe	Oct. cs
Moriah	160	———	Roberts	Yarmouth	Sunderland	run down	Mar. 12, cs
Quebec		Sunderland	———	———	———	———	Feb. 20
Reliance		———	———	Aden	Moulmein	Manilla	Feb. 27, cs
Talbot		———	———	———	———	Brindisi	cs
Trusty		Waterford	Flavin	Newcastle	Copenhagen	Agger	Mar. 20, cs
Two Friends		Jersey	Ozier	Newport	———	Colorado Sh.	Mar. 28, cs
Westall	166	London	———	———	Corfu	foundered	———

143—Crew saved by a fishing schooner to Boston, fourteen in number.
154—Fallen in with abandoned by U. S. ship Delaware, Feb. 15, 35° N., 58′ W.
156—Crew and passengers, in all twenty-nine, saved by Brothers to New York, fourteen feet water in the hold.
160—By the Evening Star while lying to. Crew landed at Winterton.
161—Run foul of by the barque St. Lawrence, and sunk fifteen minutes after being struck. Crew took to boat and picked up eighteen hours afterwards by Racer, and landed at Gibraltar.
162—Seen water-logged and abandoned, 49° N. 11′ W.
164—Crew conveyed to Gibraltar, by H.M.S. Geyser.
166—On 5th April the Augusta, Baddeley, brought home a seaman of the Westall which had foundered, the crew took boats having no time to get bread or water. In two days they landed at Cephalonia.
138—Crew conveyed to Gibraltar, by H.M.S. Geyser (last number.)

Promotions and Appointments.

(From the Naval and Military Gazette.)

PROMOTIONS.

Retired Captains—W. Holman, J. Forbes.

Retired Commanders (in the last Quarter,) under Her Majesty's Order in Council of Nov. 1, 1830—S. Sison, B. Thelwall, B. Ashley, G. Ramshay, V. W. H. Bogle.—T. Burdwood.

COMMANDERS—F. R. Coghlan, M. Thomas.

MASTERS—S. Johns, F. H. May.

MATE—O. M. C. Read.

APPOINTMENTS.

REAR ADMIRAL—Sir G. F. Seymour, Knt., CB., GCH., to be Commander-in-Chief in the Pacific.

CAPTAIN—H. Eden (1827) to *Collingwood*.

COMMANDERS—H. Layton (1825) to *Pandora*—C. F. Brown (1841) to *Wolverine*.

LIEUTENANTS—E. A. T. Lloyd (1842) to *Geyser*—W. C. Chamberlain (1840) to *Dwarf*—E. C. Miller (1826) to *Volcano*—T. H. Downes (1838) to *Firefly*—J. B. Emery (1827) to *Lucifer*—G. Cleaveland (1842) to *Hecate*—W. H. Church (1838) to *Tartarus*—W. Woolcock (1809) to *Poictiers*—R. Fowke (1816) to *Ocean*—J. D. Agassiz to *America*.

MASTERS—R. Hoskyn to *Comet*—S. Johns to *Wolverine*.

MATES—C. Shiple to *Excellent*——J. Cartwright to *Cyclops*—J. Simpson to *Camperdown*—C. H. Young to *Agincourt*—M. Jones to *Caledonia*—F. Rooke to *St. Vincent*—W. H. Hooe to *Royal William*—P. W. Coventry to *Queen*.

ASSISTANT SURGEONS—G. H. Ryan, W. H. Bent, J. C. Walsh, and J. Laird to *Illustrious*, for hospital service at Bermuda—J. W. Moffatt to *Hermes*—J. Laffer to *Imaum*—J. Walsh to *Pickle*—J. Fisher and J. Gordon to *Camperdown* to do duty at Melville Hospital—T. F. Wolrige to *Caledonia*—J. Willes to *St. Vincent*—J. Addison to *Illustrious*—J. P. Lawrence to *Styx*.

MIDSHIPMEN—J. R. Harwood and H. Moreton to *St. Vincent*—R. H. L. Warner, A. Chetham, Molyneaux, and Howard to *Excellent*—W. C. Chapman to *America*.

NAVAL CADET—W. J. Smith to *Bonetta*—C. Bullock to *Lucifer*—A. H. Helby to *Warspite*.

CHAPLAIN—Rev. H. H. Franklin to *America*.

NAVAL INSTRUCTOR—K. M. Knapp to *America*.

CLERKS—M. S. Winter to *Firefly*—C. E. Colman to *Polyphemus*—W. Sadler to *Pantaloon*—J. Lewis to *San Josef*—J. Parmeter to *Thames*.

COAST GUARD.

Appointments—Com. Wm. Edmondstone to be Inspecting Commander at Largs, NB.,—Lieut. C. Robinson to the Lepe station—Lieut Westbrook to command the *Tartar* R.C.—Lieut. J. S. Davison to command a Coast Guard station.

Removals—Lieut. C. B. Warren to Mothercombe station—Lieut. R. Taylor to Greatham, Sunderland district.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

At Penzance, Mar. 29, the wife of Capt. Anson, R.N., of a son.

Marriages.

At Eastry, April, Com. T. Harvey, R.N., son of the late Vice-Adm. Sir T. Harvey, K.C.B., to Christian Bargrave, daughter of W. Bridger, Esq., of Eastry Court, Kent.

At Tamerton Foliot, E. Jenkins, Esq. to Amelia, daughter of the late Lieut. W. Needham, R.N.

At Headley, T. Lacy, Esq., to Mariana daughter of Capt. G. Evans, R.N.

At Twickenham, Lieut. W. G. Deane, R.N., to Caroline, daughter of the late G. A. Nixon, Esq., of Tilkenny.

At Plumstead, April 18, the Rev. W. Hornby, to Susan, daughter of Capt. P. Hornby, R.N., C.B., Compter-General of the Coast Guard.

Deaths.

At Dover, Com. W. Heritage, R.N., one of the surviving officers present in Sir J. J. Strachan's action with the Rochefort squadron in 1805.

At Alvestone, April 4, Com. W. N. Tonge, R.N.

Mar. 28, in his 80th year, R. Thomas, Esq., Commander R.N.

Lately at Bremen, Germany, Com. H. W. Bishop, R.N.

At Cawsand, near Devonport, Lieut. P. Rogers, R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st March, to the 20th April, 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Th.	29·96	29·98	32	42	28	44	NW	NW	4	4	bm	bcm
22	F.	29·72	29·59	40	48	32	48	SW	SW	5	5	o	or (4
23	S.	29·50	29·58	41	48	40	49	NW	W	2	2	o	bcm
24	Su.	29·54	29·46	42	49	33	51	SW	W	6	4	qor 2)	o
25	M.	29·63	29·57	43	50	39	52	S	S	4	4	od (2	o
26	Tu.	29·63	29·75	49	51	43	57	NW	N	4	3	o	bc
27	W.	29·87	29·94	53	55	45	57	SW	SW	3	3	o	o
28	Th.	30·20	30·40	47	57	43	58	N	N	4	3	b	bc
29	F.	30·52	30·52	44	59	35	60	NW	E	2	3	bcf	bv
30	S.	30·40	30·36	47	53	40	56	E	E	3	4	bv	bv
31	Su.	30·25	30·21	47	55	40	56	E	E	3	4	bc	bv
1	M.	30·22	30·23	43	64	38	65	NE	SE	2	3	bf	bv
2	Tu.	30·15	30·06	51	65	38	67	S	S	2	4	b	b
3	W.	29·85	29·81	53	64	39	66	SW	S	3	4	bv	bv
4	Th.	29·66	29·68	52	64	41	65	S	S	3	3	b	bc
5	F.	29·76	29·80	50	56	45	57	S	SW	3	5	op 2)	qbc
6	S.	29·86	29·95	48	57	39	59	E	E	3	2	bc	o
7	Su.	30·12	30·21	44	56	34	57	NE	NE	2	2	b	b
8	M.	30·39	30·42	41	61	34	62	NE	W	1	2	bcf	b
9	Tu.	30·49	30·50	49	67	38	68	NW	W	3	2	bm	b
10	W.	30·42	30·32	53	68	42	69	SW	SW	1	1	bm	b
11	Th.	30·01	29·96	48	55	40	60	SW	SW	2	4	bc	bc
12	F.	29·99	29·92	48	56	42	59	W	SW	3	4	bcm	bcmr 4)
13	S.	29·72	29·80	50	55	47	56	NW	W	4	4	o	op 4)
14	Su.	29·90	29·98	54	56	48	58	W	NW	4	3	o	o
15	M.	30·13	30·11	50	62	47	63	SW	SW	4	4	bc	bc
16	T.	30·18	30·22	54	61	49	62	SW	SW	2	3	o	bc
17	W.	30·23	30·17	50	66	42	68	E	S	1	2	bcm	bc
18	Th.	30·15	30·20	55	54	45	59	NW	N	3	4	o	bc
19	F.	30·35	30·36	47	60	37	61	NW	NW	3	1	bcm	bcm
20	S.	30·32	30·25	53	62	48	64	NW	NW	2	3	om	bcm

March 1844. —Mean height of the Barometer=29·790 inches; Mean temperature = 42·0 degrees; depth of rain fallen 3·05 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The continuation of the Fragments from the Dardanelles, The Voyage of H.M. ship Thunderer, the paper signed G. T. W., and the Description of the Coast of China, are unavoidably prevented appearing in our present number.

The information concerning the Rattler in p. 251 of our last number will be materially corrected in our next. We understand that a speed of 9 knots has been obtained from the Screw.

Errata, p. 242. for 25° 59′ lat. of S. Channel buoy read 20° 59′, also p. 244, in lat of Monte Video, the Eastern extreme of the Chusan Islands, for 80° 7′, read 30° 7′. Both are misprinted in the original and at a late hour were inadvertently allowed to pass.

Hunt, Printer, Carlisle Street, Maida Hill.

Extracts from the Remarks of Mr. James Sprent, Master R.N., *on the Navigation of the Coast of China.*

Hongkong.—On the night of the 20th July, 1841, two days after an eclipse of the sun, a typhoon commenced, the wind blowing from the north with lightning and rain. At 8 A.M. on the 21st it blew with great violence from N.N.E., attended with very heavy rain; the wind gradually veering round to the eastward but continuing with unabated force until the afternoon, when it got round to east and E.S.E.; it then blew with less violence, moderating as it drew gradually round to the south-east.

The mercury in the barometer, which was at 29·77 on the 19th, got down to 29·60 at 8 P.M. on the 20th, and was at 29·50 at midnight, from which it gradually descended until 11 A.M. on the 21st, when the mercury stood at 29·09; from that time it rose, and was at 29·60 at midnight on the 21st.

The *Rattlesnake* was moored in 6 fathoms water, with Green island S. 80° W., the island of Wonchuchow N. 21° W. to N. 48° W., and the point of the peninsula on which the Chinese forts were erected N. 85° E. by compass; the bottom was stiff mud with shells, most excellent holding ground, for, although we had two large transports, 800 tons each, foul of the *Rattlesnake*, during the height of the typhoon, and one of them nearly athwart our hawse, our anchors never started, and when we came to heave up we had very great difficulty in waying them.

On the evening of the 25th of July, another typhoon commenced, which blew with as much violence as the last. The wind on this occasion commenced blowing from the north-east, and drawing round to the eastward attained its greatest force about noon on the 26th, blowing then from E.S.E. with heavy rain; from that time it continued with unabated violence, until early on the morning of the 27th, when having got round to S.S.E. it became more moderate.

In this typhoon the mercury in the barometer fell gradually from 29·68, at which it stood at 8 A.M., on the 25th to 29 45 at midnight; it still kept falling until 8h. 15m. A.M. on the 26th, when it was at 28·57; it then rose rather more rapidly and was at 29·45 at noon of that day, when the typhoon had just attained its greatest force; the mercury still continued rising and was at 29·67 at 7 P.M.

It is said that typhoons do not extend farther north than the twenty-seventh degree of latitude.

Ships in sailing into or out of Hongkong harbour may with a fair wind pass between Green Island and Hongkong; the channel though narrow is short, and has depth sufficient for the largest ships, although it is marked shoal in the charts; but it would not be prudent to attempt this passage in a large ship, or indeed in any other without a fair and commanding breeze, as the tide runs strong and irregular in the passage.

In passing to the northward of Green Island large ships must keep well over to the northern shore, to clear the mud flat which extends out a considerable distance from Green Island in that direction; there

does not appear any very good mark to enable a stranger to clear this shoal; it would, perhaps, be better to have a buoy placed on its extremity.

On the 13th September, 1841, we being then in lat. 28° N., long. 122½° E., the northerly monsoon commenced with heavy squalls and passing showers, and continued blowing strong from north to N.E.b.N. for several days, which with the current running to the south-west prevented our making way to the northward. When these strong breezes occur it is generally considered best, to run in and anchor, sheltered by some of the numerous islands, with which the whole coast of China abounds; and as these strong breezes generally abate in two or three days, a ship may then proceed on her voyage, without having had the wear and tear, to which she would have been exposed if she had kept underway in the strength of the breeze.

The northerly monsoon appears to commence rather earlier on the east coast of China than it does in places to the west of the Formosa Channel. At Nanking it commenced on the 5th September, 1842, with heavy squalls, lightning, and passing showers.

On the 13th September 1841, the transports which we had in company were dispersed during a dark squally night; on the 15th we anchored for shelter and to collect the convoy, to the south-westward of some islands, called the Taichow Group: the *Rattlesnake* was anchored in eleven fathoms water, muddy bottom, with the eastern point of these islands N. 60° E., in latitude by observation 28° 24′ N., long. by chronometer 121° 43′ E.; but as our chronometers were not going very regularly this longitude may be only considered as an approximation. It may be necessary to remark here that, some of the transports which stood right off the land, at the commencement of the breeze, when two or three degrees to the eastward, were out of the influence of the current, and the wind drawing round to the eastward enabled them to fetch Chusan on the starboard tack, arriving there four or five days earlier than we did, who remained at anchor three days off the Taichow islands, and worked up alongshore the remainder of the way.

Nearly due south from Patahecock, is a group of small islands and rocks, not laid down in the Admiralty charts, some of them are inhabited, and in a state of cultivation; they are six or seven leagues to the eastward of the nearest land, with an apparently clear channel between them; we had a depth of 15 and 16 fathoms water when in the channel six or seven miles to the westward of the outer group, which appears to be the Heisan islands of Thornton's old chart, revised by Dalrymple; but they have been omitted in all the subsequent charts that I have seen; the centre of the group I make in lat. 28° 54½′ N. by observation, when off them, and the longitude eight minutes of a degree east of the temple on Chusan hill, which has been converted into the citadel.

About eight leagues to the northward of the last mentioned group is the island of Patahecock, one of the Quesans. This island is high, and said to derive its name from its resemblance to a Chinese character; there are two or three small rocky islets close to the eastward of it; Blunt peak the north-eastern island of the Quesan group, is about five miles N.N.E. from Patahecock. We passed about three-quarters of a mile to the eastward of it, in 9 and 10 fathoms water.

The flood tide sets strong to the westward, near these islands for which an allowance must be made when passing without them.

High water on full and change days about eleven hours.

Ships bound to Chusan may pass either to the eastward or westward of the Quesan islands; but, as there are some rocks in the inner passage, it will be, perhaps, more prudent for strangers to pass to the eastward of them; having done which, they may (if bound through Gough passage,) steer to the north-westward towards Buffalo's Nose; passing between Starboard Jack (a low small rock with a rocky reef,) and the small islands called the Whelps. In this track you will have seven and six fathoms water; having passed to the northward of the Corkers (a number of rocks lying between the Whelps and Buffalo's Nose,) it will shoal to 5½ and 5 fathoms at low water; then keep more to the northward to pass to the south-west of Tree-a-top, a round topped barren island, having at present no trees on it; give a good berth to this island and the next one of St. Andrew for it shoals some distance from them.

Gough passage lies about north-east and south-west; it is formed by the large island of Footoshan and four small islands on the west: the channel is about half a mile wide, and a mile and a half in length; the water is very deep in the channel, and both shores are steep to, but a shoal runs off a small distance to the southward of the small islands. Having passed through the channel you will soon get soundings in proceeding to the north-eastward for Ketow Point; this channel is not the most direct for Chusan, but it has the advantage of being without sunken rocks, or other hidden danger, having the narrow part of the passage short, and good anchorage at each end of it.

In steering to the north-east when ships have passed Singloshan (a small peaked island lying in-shore) they will again get into deep water, and no convenient depth for anchoring can be found between this and the anchorage between Tea and Bell islands, should a ship be bound through the Tower Hill passage, which is the one now most generally used, the most direct passage (that to the eastward of Elephant island) being narrow with sunken rocks in mid-channel and very rapid tides running in whirlpools in the most dangerous part.

N.E.b.N. from Ketow Point is Roundabout island, which I made in lat. 29° 53′ N., by observation when off it; the channel between it and Ketow Point is clear with very deep water.

The south point of Tower Hill bears N. 72° W., by compass from Roundabout island; the peak of Elephant island (which is very rugged) bears N. 50½° W., from Roundabout island; from this peak a neck of land runs out to the eastward called the Elephant's Trunk; the water is too deep for anchoring to the southward of this island.

The most direct channel to Chusan harbour is as before noticed between Elephant island and the islands north of it on the west side and Deer island, and the isles adjacent on the east side. Deer island has a high peak from whence it slopes down to a point at the south-west. To the S.S.Eastward of this island are three smaller islands of moderate height, called the Deer Watchers; the largest of these which forms the south-eastern boundary of the channel bears about N.W.b.N. from

Round-about island, and E.N.E. about a mile and a half from Elephant's Trunk.

Two dangerous rocks with very deep water round them lie nearly in the middle of the narrowest part of this channel; where the tides run in whirlpools, and with so much rapidity that during the strength of the tide it is difficult to keep a ship's head the right way, even with a good fair breeze; therefore, if wishing to go through this channel arrange it to pass these rocks near about slack water, when by attending to the marks for clearing them it may be done without danger.

From a boat at anchor in two fathoms water on the outermost or southern of these rocks on which H.M.S. *Melville*, struck, the west point of Deer island bore S. 24° E. by compass, that point being then on with the west point of the largest Deer Watcher, and Ketow Point open of it three degrees; a green-topped rock on the west side of the channel N. 75° W., and the west point of Sarah Galley island N. 6° E.

The northern rock, on which there is not more than six feet water on low springs, bears north about a cable and half length from the last, having deep water between them; from it the west rocky point of Sarah Galley island bears N. 12° E., rather more than a cable's length distant; the flagstaff on Citadel Hill N. 8½° E.; and the green topped rock on the west side of the channel S. 71° W.; Ketow Point being then shut in behind the west point of Deer island.

By keeping the west point of the largest Deer Watcher a little open of the west point of Deer island, a ship will pass clear to the westward of the sunken rocks, between them and some rocks above water on the western side of the channel; these last may be approached within half a cable's length, and when above the west point of Sarah Galley island steer towards the west point of Macclesfield island, the channel being then perfectly clear. The west side of Macclesfield island is steep to, if bound into the inner harbour you must pass close to this point, and it must be remembered that the flood tide sets through the harbour to the westward, therefore, should the wind be light, and the flood running strong, anchor as soon as you can get a convenient depth, or the tide will set you over into deep water towards the north-east point of Tea island. Going in with a large ship keep along the north shore of Macclesfield island to avoid the Middle Ground, which commencing a little distance from Guard-house island, extends from thence towards Macclesfield island, nearly two-thirds of the channel over, having from two feet and a half to three and a half fathoms water on it. In the latter depth near its southern edge Macclesfield island bore S. 11° E. to S. 60° E. by compass; Guard-house island N. 48° W. to N. 67½° W., and the flagstaff on Citadel Hill N. 59° E. The marks to clear this shoal, keep Tower Hill on with the slope upon the south rise of Tea island, or do not open the small fort on Trumball island to the north of Macclesfield island.

At the east end of the harbour, to the eastward of Trumball island, and nearly in mid-channel is a large rocky patch generally above water, but covered at high tides; it has a stone pillar erected on it to point out its situation when the rock is covered; about a cable's length from this pillar is a small sunken rock, having only ten feet water on it, with five fathoms between it and the Pillar rock; from it the south-

east flagstaff on Chusan Hill bore north, and the stone pillar on the rock east.

By meridian altitudes of Saturn, with artificial horizon on shore, I made the latitude of the Citadel Hill 30° 0′ 5″ N., and 41° 51′ 35″ E. of Madras Observatory by chronometers.

High water in the harbour on full and change days at 11 A.M., but the flood tide runs through the harbour to the westward until 1h. 30m. P.M. High springs rise about thirteen feet, ordinary springs ten feet; but the rise is very irregular, being apparently influenced by the winds, strong northerly winds causing the highest tides.

From Ketow Point to sail in by the Tower Hill passage.

The island of Tower Hill may be known from its having a high peaked hill near its centre; from Round-about island the south-west point of Tower Hill bears N. 72° W. by compass distant about eight miles; steer to pass at any convenient distance from this point which is steep to, keeping along Tower Hill until you enter the passage between it and Bell island. In the whole of this track the water is very deep from 35 to 100 fathoms; between Tower Hill and Bell island the depths are from 30 to 40 fathoms; the southern and eastern sides of Bell Island are clear with deep water near them. Having passed the south-east point of Bell island, steer over towards the north-west point of Tea island, giving it any convenient berth in passing; then keep nearly in mid-channel between Tea island and the Chusan shore, you may pass at any convenient distance from Guard-house island which is clear on the west side, but taking care to avoid being set in through the narrow passage between it and Chusan; and also to avoid the middle ground, which as before noticed extends out to the southward; this last will be avoided by keeping the small white fort on Trumball within the north point of Macclesfield island.

This passage though much longer than the direct one before noticed, has the advantage of being wider and clear of any hidden dangers; the great drawback upon it is the tide, for the flood which would bring up a ship from Ketow Point to Bell island would be against her in going from thence to the harbour of Tinghae; it should, therefore, if possible, be arranged to get into the channel between Tea and Bell islands about high water slack, when the first of the ebb would take a ship into the harbour.

The first of the flood sets to the southward in the channel between Tea and Bell islands, then turns and sets for nearly nine hours out of twelve to the northward, longest and strongest on the Tea island side.

It may be necessary to remark, that what is named Bell Rock in the old charts is a small but well cultivated island covered with verdure.

Ships bound to Ningpo may often find it necessary to anchor off Just-in-the-way; and as the soundings about here are irregular and generally very deep twenty or thirty fathoms, it may be useful to know where to find a convenient depth for anchoring. Ten or eleven fathoms water will be found with the peak of Tower Hill midway between the north-east point of Tygosan, and the small low islet off that point, the peak bearing then S. 87° E.; Kintang or Silver island

N. 2° W., to N. 77° W.; the low rock called Just-in-the-Way N. 72° W.; a sharp conic hill on Tygosan S. 10½° E.; the peak of this hill will then be seen over the west shoulder of a hill on a projecting headland of Tygosan. This hill on the headland, has some dwarf trees on it, and the conic hill will appear in a gap between the first and second clump of trees from the top.

This bank will be found, if in running in, the peak of Tower Hill is brought over the space between the north-east point of Tygosan, and the small islet soon after passing them. Proceed on with that mark under easy sail, and anchor so soon as you get a cast of 10, 11, or 12 fathoms, for the bank is of no great extent and has deep water round it; but we anchored here several times in the *Rattlesnake*, and found it very good holding ground.

A ledge of rocks runs off from the south-west end of Kintang, on which a French corvette, by keeping too close in grounded; they may be seen at low water, and will be avoided by keeping the peak of Tower Hill a little within the low north-east point of Tygosan in passing them.

About half a mile to the northward of the Deadman is a rock which only shows at low water; this will be avoided by keeping Square island its breadth open to the northward of the north extreme of the Deadman, until Passage island touches the south-west end of the Triangles.

To sail into the river Tahea. A sharp peak on Kintang on with the south point of the Triangles N. 65° E., leads into the channel.

N.B.—The peak here mentioned is not the highest hill on Kintang, but will be distinguished by being sharp and having another peak close to the northward of it when seen in the above view.

Singkong.—A village on the west side of Chusan is a place of very little trade; but the Chinese junks bound to the northward generally run here for shelter in strong northerly winds. The harbour is formed by the Chusan shore to the eastward, and three islands to the westward; the southernmost of these islands, is called Poplar Island in the old charts; between this last island and the Chusan shore is the general anchorage, for farther to the northward the channel is too narrow for any other than very small vessels, being only fifty-three fathoms across from the depth of 2½ fathoms off the point of Middle island, on which the Joss-house stands, to the same depth off the mud flat on the Chusan shore; and having 6 fathoms water in mid-channel or rather nearer to Middle island.

From the south-east point of Poplar island a shoal mud spit runs out a considerable distance; Kiddisol on with the east point of Tower Hill leads on the point of this spit, on which there are only six or seven feet water; there is a narrow channel of deep water between it and Pelican Rock, and it is quite steep to on its western side. Pelican rock, so called in the old charts, is a rock off the south point of Poplar island, when this rock comes on with the north-east high hummock of Kintang, you will be to the southward of the spit before noticed and may then haul out to the westward.

From the south-west of Chusan abreast Kiddisol, to the point of the entrance of Singkong harbour, an extensive mud flat lines the shore;

nearly mid-way between these points, and near the western edge of the flat, is a small low islet; ships in working must be careful how they stand towards this flat, for it shoals suddenly in some places. Ships may, if necessary, find anchorage in ten or twelve fathoms off the edge of this flat.

The high rugged point which forms the south-east point of the entrance to the Singkong channel, is steep to; coming from the southward, when the small round fort comes just open of this point, you may steer towards it, being then clear of the mud flat which extends out from the Chusan shore to the southward of the point. The point being steep to as above stated may be passed at any convenient distance; but a mud flat, which dries at low water, extends out some distance from the point on which the small round fort stands. The best anchorage is abreast the fort, with it bearing east, in nine fathoms water, a bottom of good stiff mud, and with the south-west point of Chusan touching, or a very little overlapping the east point of Tower Hill island, you will be nearly in mid-channel between the mud flat which extends out from the south-east point of Poplar island, and that which lies off the opposite shore; farther in, to the northward, the water is deeper and the holding ground not so good.

There is a passage between Poplar island and the next island north of it (Middle island,) which will be useful should a ship have to get underway from the anchorage, with a fresh southerly breeze.

To sail through this passage, keep nearly in mid-channel going to the northward, or rather nearer Poplar island, the north-eastern point of that island being steep to, until a clump of trees or a small green hill north of the Round fort, is on with the lowest part of a large saddle on the high land above it; (this high land sloping down forms the south-east point of the Singkong channel), steer through with the above mark, until a small islet off the south-west point of Blackwall just touches that point; then keep this last mark on, until Pelican Rock comes open of a low Rocky point extending out from the west side of Poplar island; you may then haul to the southward, giving a good berth to the rocky point above noticed, which runs out to the edge of the mud flat off Poplar.

The north-east point of Poplar and south point of Middle island are both steep, having 20 fathoms water in mid-channel between them, but extensive mud flats reach out from both these islands to the westward. The tides run strong and in eddies, through the narrow part of the passage, care must be taken, therefore, to keep as nearly as possible in mid-channel. We went through this passage in the *Rattlesnake*, when bound to the southward, with a strong breeze from the south-east, when we should have found it very difficult, if not impossible, to have got out by the other passage.

At the anchorage Singkong, high water on full and change days 10h. 45m. A.M., but the flood tide ran to the northward about an hour longer. Rise in ordinary springs ten feet; neaps, four feet.

Singkamoon, a village on the south-east side of Chusan, has a very good harbour for small vessels, and is the resort of a large number of fishing craft which seek shelter here in strong breezes, or come here for the purpose of laying their vessels on shore, and cleaning and paying

their bottoms on the mud and clay banks, which line both sides of the harbour or channel, which is formed by the Chusan shore on the north, and to the south by Lookea, which is a number of islands connected by mud banks, that are mostly covered at high water. The island of Takan, or Mon-tse-seh, as it is sometimes called by the Chinese, forms the western boundary. The principal entrance is between Lookea and Takan, but a bank of mud extends right across between those two islands, on which there is very little more than two fathoms in the deepest part at low water; a bar of mud having about the same depth also stretches across from the north-west point of Lookea to the Chusan shore, having 5, 6, and 7 fathoms to the north-eastward and south-westward of it.

The *Rattlesnake* was moored off the village in five fathoms at low water, with her stern abreast the landing-place when riding to the ebb; the channel was here 135 fathoms across from bank to bank; having a depth of three fathoms water, 50 feet from the Chusan bank, and the same depth 65 feet from the Lookea bank; in swinging our rudder was never in less than 4½ fathoms water.

High water here on full and change days at 9h. 15m. A.M., rise on springs 9½ to 13½ feet, the evening tides rising a foot or two higher, than those in the morning. Neap tides rise about five feet. The flood sets to the westward through the channel about one hour and a half after it is high water by the shore.

I could find no mark that would be useful to a stranger in crossing the mud bars before noticed; but, as there is an extensive anchorage to the southward of the harbour's entrance in any depth from 5 to 10 fathoms; it will be better for ships, requiring to go in, to anchor off it and find a channel for themselves over the bar which as it is composed of mud may frequently fill up the old channels and make new ones.

In coming towards the entrance from the westward, ships must not approach the south side of Takan too close as a bank extends some distance from it.

[The foregoing remarks by Mr. Sprent, (Master R.N.,) while in command of H.M.S. *Rattlesnake*, will be found of service to vessels proceeding from Hongkong to Chusan, besides giving useful information on the most important channels and anchorages of those islands. With regard to the limits of the typhoon, the well informed seaman will not forget that experienced by the celebrated Admiral Kruzenstern in 1804, as far north as 32°, who passed through the very focus of it, as related in his voyage. With regard to the remarks on Hongkong, we may observe that the mud flat alluded to by Mr. Sprent, is Kellet bank, and the mark for clearing its northern edge is the Devil Peak on with the white rock off Wonchuchow, (See chart of Hongkong.) On the passage to Chusan on the 13th, the remark on the current is important to ships making that passage. And with respect to the Heisan and Taichow groups we may merely observe, that the charts since Mr. Sprent made his observations, have undergone considerable contributions from the remarks of our officers, and this particular portion is undergoing further correction from the important surveys brought home by Captain Kellet, which will very shortly be published.—ED. N.M.]

Nautical Description of the Coast of China.—*South of the Chusan Group.—By Captains Kellet and Collinson.*

(Continued from p. 203.)

The Tseigh islands from the south extreme of a very large and numerous group of islands; to the northward and westward of these islands, between them and Takew, is an excellent anchorage, sheltered from all winds, called Bullock's bay. The best entrance into this bay is to the northward of the Tseigh islands, between them and Pwanpien shan. Here water may be procured, and bullocks of the best description were obtained from the natives, and in any quantity. The harbour may be known by a remarkable conical island, called Coin island, (with three rocks N. ½ W. of it,) which is the north-easternmost of this group, and is in lat. 27° 50′ N., and long. 121° 15′ E. W.N.W. of Coin islands is a flat island with rocks off its southern extreme, and two rocky islets to the westward, between which and Tongtau shan there is a safe passage in 8 fathoms.

Tongtau shan, the largest of the group, and forming the northern boundary of Bullock's bay, is 6 miles long and 2½ miles at its extreme breadth; the feature of its eastern face is high and precipitous; between it and Pwanpien shan, there is a junk passage, but it is not available for vessels.

North of Tongtau shan, there are two large islands Miaou shan and Chwangpeen shan. The channel between these is shoal, having only 3 fathoms; Miaou shan and Chwangpeen shan are separated by a channel, too narrow for a ship. The extent of the two islands together is nine miles.

N. 55° W., 8 miles from Maiou shan, is the entrance of the Wanchow foo river, with an island in the mouth of it. The inhabitants of Tongtau shan report that the approach to the entrance is very shallow. S. 65° W., 5 miles from Miaou shan, is a dangerous rocky shoal. We found on approaching the main from Miaou shan that the depth of water decreased at 4 fathoms. To the northward of Miaou shan, are two large islands called Hootow shan and Laouka shan, with two small islands between them. The channels between these islands, and between them and the main, have not been examined. Two and a half miles to the southward of Laouka, there are four cliff islets, and half a mile from the south point of it is another islet. The *Plover* passed between these, and anchored to the westward of a small islet on the south-west side of Laouka; in this bay the water shoals suddenly from 19 to 6 fathoms.

N. 75° E., 17 miles from Laouka, is the easternmost island of the next group called Pe shan, in lat. 28° 5′·5 N., and long. 121° 31′·8 E. It is three miles long from east to west, has three rocks on its northern face, and two islets on its southern. North-west from it is a sugar loaf island, with a small one close to it, and W.b.N., 1½ mile, is another low level island.

Taluk shan is west from Pe shan, 5½ miles; this island is 771 feet

high, and affords good shelter on its western side in 3 to 4 fathoms; its eastern face is a high and precipitous head.

Seaoluk shan are three islands, 1½ mile south of it; between the two the depth of water is 8 fathoms. To the west of Taluk shan, 3 miles, is Chinke shan which has a large and populous town on it. To the north of Taluk shan, 2 miles, is another island, which is also populous. Chinke shan faces a deep bay on the main.

North-west, 24 miles from Taluk shan, is a high conspicuous mountain on the main; the sea washes the foot of it, but the entrance to the sound was not explored. To the westward of Seaoluk shan, distant 6 miles, is Nanpai shan an islet. On the point to the westward of Nanpai shan, there is a large and populous village. Heachuh shan, the southernmost island of the Taichow group, bears N. 50° E., 27 miles from Pe shan. N. 45° E., distant 16 miles from Pe shan, is a small island, with a reef running off its southern end, and which is the eastern island of a group; it is in lat. 28° 15′·8 N., and long. 121° 44′·5 E.

South-west, 2 miles from this island, are 4 small peaked rocks, with rocks awash between them. West 2½ miles, is the island of Shetung mun, having many small rocky islets nearly joined to its southern extreme, and a reef to the westward of them. A vessel may get very good shelter under this island, unless the wind is far to the eastward.

Between this island and Teaoupung mun. are two islands; the eastern passage of the two is a mile wide, and has 3¼ fathoms. North-east of the centre island are 3 small islets, with a reef extending from the east end of the northernmost. To the southward of the roadstead are four islets, the largest of them is called Sanshe shan. The channel between them and the main is a mile wide, and has 4½ fathoms through it. The point opposite to these islets is called Chinseu shan, and forms the south-east horn of a shallow bay, and is connected with the main by an isthmus occasionally overflowed.

Through the Teaoupung mun all the coasting trade passes, and from the number of towns erected on this barren headland, it would appear that it is a stopping-place for the numerous junks that pass. When the Starling anchored in this roadstead, there were nearly 100 sail of junks at anchor. They all wayed together, and passed through the Mun to the northward.

North, 6 miles from the easternmost island off the Teaoupung mun, is the island of Chikhok, in lat. 28° 22′·4 N., and long. 121° 44′·2 E. It is 760 feet above the sea, and bears S. 58° W., from the anchorage at the Taichows. It rises abruptly, and has a most remarkable broad yellow stripe on its south-eastern side, forming one of the best leading marks for the coast. There is an islet, 1½ mile W.N.W. from it, off the north end of which there is a half tide rock. Westerly from Chikhok is a crooked island, under which there may be shelter, but between the two there is foul ground.

East of Chikhok, distant 9½ miles, is Heachuh shan, the southernmost island of the Taichow group, in lat. 28° 13′·3 N., and long. 121° 55′·2 E. This group extends 9 miles in a northerly direction from Heachuh shan; it consists of two large and ten smaller islands. Between the two large islands is an excellent harbour, the approaches to which, both from the eastward and westward, are free from danger.

The best anchorage will be found south-east of the island, lying off the south-western extreme of Shang tachin shan, which is the northern large island. The bay to the northward of this is too shoal for anchorage.

Between Shang tachin shan and the small island, one mile and a half to the N.N.E. of it, there is a passage. Several watering places will be found on Shang tachin shan, but the supply from any one of them is not very abundant. The southern large island, called Hea tachin shan is the highest, its elevation above the sea being 750 feet. It is well inhabited; a couple of bullocks and other stock were obtained here.

There are four islands and two reefs to the southward of it. The southernmost island, or Heachuh shan, has a remarkable finger rock off its south side. The western rock lays S. 22° W., three and a quarter miles from the highest part of Hea tachin shan, and is seen at all times of tide. N. 41° E., 4½ cables from the above rock, is a reef that covers at high water; it bears from the peak of Hea tachin shan, S. 20° W., two miles and three-quarters.

There is a good channel west of the Taichow group, and to the north of Chikhok are numerous islands, many of which are joined by the mud at low water.

N. 55° W., distant seven miles from the northern island of the Taichow group, are two islands close together, that will be mistaken for one except on an E.N.E. or W.S.W. bearing. Junks take shelter under the western point in strong north-east winds; off the north-east and north-west points are rocks; a reef also extends off its south-east end. Two and a half miles to the eastward of these is another cliff islet, which is the easternmost of the group. The channel between these islands and the Taichows is free from danger. The mainland is distant nine miles from the above islands, and the depth of water between the two is from 6 to 3 fathoms, shoaling gradually towards the coast, which is very low, and at low tides dries a long way off from the shore.

North, ten miles from the northern Taichow, is the easternmost of a large group in lat. 28° 42′·2 N., and long. 121° 55′·1 E., called Tungchuh seu. Shelter may be had under it on its south side, but there is always a heavy swell which renders riding there very unpleasant. There are several rocks and islands within two miles of its southern, and three islets on its northern face. There are several large islands lying to the north-west, some of which would no doubt afford good shelter, but they have not yet been examined.

Seven miles, west a little southerly from Tungchuh seu, lies the island of Chuh seu, with a sharp cone 670 feet above the sea, over its southern point. Midway between the two is a cluster of rocks, four in number; and S.S.W. from Tungchuh seu are two islets, with detached reefs bearing from it east two cables' distant, and N.b.W. four cables. On the same bearing from it, three miles are two islets, with a reef off the eastern end of the southernmost. From Chuh seu there is a solitary cone island S. 60° E., two miles and three-quarters.

Good anchorage, with a convenient and abundant watering place, will be found under and to the south-westward of the peak of Chuh seu in 6 fathoms, between an island with a reef off its north-east point and

Chuh seu. On the peak at the north-west end of Chuh seu is a look-out, and three chimneys, from whence they communicate by signals with Taichow foo. The entrance to the river bears S. 88° W., eight miles from Chuh seu. The inhabitants reported that vessels of 12 feet could not get over the bar, except at high water, and that one tide would carry you to the city; the tide rises in the neighbourhood from 18 to 20 feet.

The channel between Chuh seu and the main appears to be shoal, with several rocks covered at high water. Vessels, therefore, ought to pass to the eastward of the whole group until the inner channel has been examined.

South of Chuh seu, there are several small islets, with safe passages between them. There are several rocks and islands to the northward towards Sanmoon bay, which cannot now be described, not having been sufficiently examined.

N. 62° E. from Tungchuh seu, and distant seventeen miles, is the Hishan group, consisting of three inhabited islands and eight barren rocks, extending four miles in a north and south direction, and two miles east and west. The southernmost is the largest, and makes like a saddle. It is 320 feet high, and is in lat. 28° 50′·8 N., and long. 122° 14′·4 E. The rocks are steep, with remarkable cliffs. The sea has undermined the northernmost one so much that it bears some resemblance to a large mushroom. The inhabitants, who are Fukien men, call the island Ung shan. The depth of water in the vicinity is 20 fathoms; they are too small and two detached to afford much shelter. The inhabitants are all fishermen, from whom excellent fish may be obtained. There is also a fine stream of water on the island, but it would be difficult to get at it.

North from the highest of the Hishan islands, distant thirty-two miles, is Patahecock, the southernmost of the Kweshan group.

N. 25° W., distant twenty-two miles, is Tantow shan, or Cape Montague, in lat. 29° 10′ N., and long. 122° 2′·5 E. It is an island separated from the main by a channel varying from one mile to one mile and three-quarters wide. It is 738 feet high, and nearly divided into two parts, the connection being a low shingly isthmus.

Four miles to the southward of Cape Montague, and nearly attached to the main, is a small islet with a reef off its eastern point. Twelve miles S.S.W. of Cape Montague is Leaming, forming the northern and eastern points of Sanmoon bay, having a rock off its south-western end.

South of Cape Montague, and three miles from the coast, are four islets; the southern is nine miles from the cape, the others are severally three, five, and seven miles distant from it, with good passages between them to enter Sanmoon bay,

Sanmoon bay will be readily recognized by a most remarkable thumb peak, called by the opium vessels that frequent this bay, Albert peak, and by the Chinese Tafuh tow; it is about 800 feet high, and is in lat. 29° 5′ N., and long. 121° 58′·5 E.

S. 38° W., two miles and a half from Leaming, is Sanche shan, or Triple island, the depth between the two being 10 or 11 fathoms. Vessels entering either to stop a tide, or driven in by weather, will find

good shelter from the north-east monsoon, to the westward of Leaming. Care, however, must be taken in standing into this bay, as it shoals suddenly. If the north peak of Leaming is not brought to the southward of east there is no danger; it is all soft mud in the bay.

Due west of Leaming, six miles, is a conical island, with a reef off its south end.

Tafuh tow, or Albert peak, is situated on an island to the northward of this half a mile, but the channel between has many rocks. In the northern extreme of the bay, between Leaming and Albert peak island, is a small entrance into Sheipoo.

Having rounded the conical island, St. George island will be seen, bearing north-west four miles. The bay shoals gradually as you approach it, and the anchorage, half a mile south of it in three fathoms, is secure in north-east winds. There is a well of good water on the island, but it is not easily got at nor plentiful, and vessels in want of water will find it more convenient to anchor to the southward and eastward of Albert peak, where water will be easily obtained. The bay to the northward of St. George island is shoal, and full of rocks; it extends a considerable distance. The isthmus between it and Nimrod sound, or Tseangshan kang, is only seven miles. There is an entrance into Sheipoo, four miles to the north of St. George island, which is frequently used by junks.

Westward of St. George island, four miles, is a group of islands with many sunken rocks off them. The mainland is distant three miles to the westward of this group, and rises immediately from the sea to the height of 900 to 1000 feet, forming a continuous range along the coast. Patahecock bears from Cape Montague, N. 36° E., 15½ miles.

Vessels bound for Sheipoo roads may pass close to the northward of Cape Montague, and run in due west for the two forts which will be seen on the summit of the island forming the entrance to Sheipoo.

North of the roadstead are three islands. South three cables from the eastern end of the centre island, Wangche shan, are the Bangoa rocks, which always show; there is deep water close to them. To the westward of Bangoa, the water shoals off the centre island to 2¼ fathoms, nine cables from the land, to avoid which do not bring the higher fort to the southward of west.

Cliff island, or Seao-seao, lies nearly in the centre of the roadstead; anchorage will be found off the north-west end of it in 4 fathoms mud; there is always a considerable swell rolling in with a strong wind. Vessels passing between Cape Montague and the main should keep to the eastward of Cliff island, and pass between it and a rock, seven cables further to the eastward. The deep bay on the western side of Cape Montague is shoal, but the south-west point is steep to.

A reef of rocks extends from the westward of Cliff island, and the channel between it and the main has only three fathoms in it. South of Cliff island is another islet; the ground between is foul.

From the roadstead into Sheipoo harbour are three entrances, all of which are very narrow with rapid tides and chowchow water, rendering the navigation dangerous for ships. Two of them are formed by Tungmun, the island on which the forts are situated. The third en-

trance is one mile and a quarter to the southward of Tungmun, and is the best of the three.

At the entrance to it is a small flat island, with a reef of rocks extending easterly; pass to the north-eastward of this island, as there is a reef to the westward between it and the main. The town is situated on the main, forming the north boundary of the harbour; it is walled, but the walls are in a most dilapidated state. The houses and shops are not good. It derives its importance from its being a convenient port for the coasting trade. At high water the harbour has the appearance of a splendid basin; but at low water the mud dries off shore a long distance, giving it the appearance of a river.

At the western extreme of the harbour, is a narrow passage into Sanmoon bay, and midway between this passage and the town is a large island. South of this island is another narrow passage into Sanmoon bay.

N. 36° E. from the highest part of Cape Montague, seven miles and half is a very dangerous wash rock; it is as near as possible half way between Patahecock and the Cape.

(To be continued.)

The Report of the Committee on Shipwreck Considered.

(Concluded from p. 270.)

Q. 245. "Will you state what, in your opinion, are the principal causes of shipwrecks, and any remedies which you think may be applied?"

A. "When there are so many ships afloat at all times, in all climes, and in all seasons, there must necessarily be many shipwrecks caused by the elements; but, I apprehend that there are other causes which may be remedied, the principal of which I will state. The primary cause (I am aware that I am treading upon delicate ground,) I conceive to be the facility of Sea Insurance; that there is not enough of inquiry made into the value of shipping insured. I need hardly quote the circumstances connected with Wallace's case, which lately occurred in London. Since that time several cases have occurred; two instances particularly, which I will state, to show that fraud is used; that is to say, that ships are actually lost fraudulently for the sake of the amount insured. One was a vessel upon the trial of which I was called by the Underwriters as a professional evidence. She left the port of Greenock last August, upon a voyage to the Havana; when she got fifty miles to the westward of Ireland, she was made to carry away both top-masts; upon which, instead of doing all in their power to get back to port, which they might easily have done, the wind being fair and the weather moderate, the top-masts and the whole of the sails were cut away, and at this time the people on deck gave evidence that they were not aware that there had been a squall at all. They lay there for twelve hours, without making the least attempt to wear the

ship, although the wind being at that time from the westward, they might easily have attained a port in Ireland; and the first ship that came up they abandoned the vessel. When it came before the jury court, where I was summoned as evidence, the master's reason for leaving the vessel was,—that, he had no spare sails on board to carry the vessel into port; the only spare sail being an old topsail, which required repair, and was not fit to use till it was repaired. Now, I apprehend, had this vessel not been insured, the owner would have taken care to have a good stock of spare sails; neither would she have been so easily abandoned.

"Another case, of which I have seen the evidence, taken by affidavit of a man who was at the helm, was a vessel from the same port, bound to New Brunswick; she was a New Brunswick vessel; she left the port of Greenock, and arrived upon the coast of New Brunswick. The master, for some reason which is not properly explained, persuaded the passengers to land at the first point they made in New Brunswick. Having had a long passage, they were very glad to do so. His reason for doing so was, that the vessel wanted repair, and that they would be obliged to anchor for some time. As soon as he had got rid of the passengers, he got his anchor up, and instead of steering for his port, for which the wind was fair, he ordered this man to steer the vessel ashore. He abandoned the vessel, and she was subsequently sold to a shipowner in Nova Scotia. I have seen the evidence of the master who brought the vessel home, and she at present lies in a port in Scotland. She was abandoned by the master, who ran her on shore, and this person went down there, deputed by the party who bought the vessel; he easily pumped her out and got her off the shore, and upon getting the hold clear, perceived three auger holes in the bottom of the vessel, immediately under the cabin. He took the vessel to a port in Nova Scotia, fitted her out for Great Britain, and she arrived without any more repair than a little caulking in her upper works. This is another instance of fraud in insurance. The authorities were applied to upon one of these occasions to take up the person upon criminal process; but I believe they refused, in consequence of there not being evidence enough to convict."

These are very glaring instances indeed, and the wonder is that, among a commercial people who pride themselves on their strict integrity such things should be suffered with impunity.

The remedy suggested by the above witness in answer to *Q.* 246, is: "The only remedy I can suggest upon this point is, that, if practicable, a measure should be brought forward restricting the amount of insurance, that is to say, that a person should not be allowed to insure beyond the actual value of the vessel. I would attain it in this way: I would lodge the vendition at the custom-house where the vessel is registered. In that vendition the price of the vessel is stated, and no one should be allowed to insure his vessel beyond such a value. I know that this may be considered objectionable, but I think it would have a good effect." There is very little doubt that if such a law were passed to bind the rogues, it would prevent the wilful loss of ships. What is the object of insuring beyond the value of a vessel? There can be but one answer to that question; a law therefore to restrain the dishonest could not be objected to by the honest.

A. 340. "I have generally found in the case of ships getting on shore, I may say 80 ships out of a hundred get on shore either from the ignorance, carelessness, or stupidity of the masters.

Q. 424. "Do you think the owners are as competent to examine as a Board properly constituted."

A. "If they were owners that knew anything about a ship they would be; but now we have got a class of shipowners very different from what we had formerly. We have got people who just get £300 or 400 together; they may be shoemakers, tailors, or blacksmiths, but they put their money together and buy a ship. They get a master, and the principal thing they enquire about is, if he is an honest man; they do not know anything about his qualifications. They put him in as master of the ship, and perhaps at very low wages, for economy, as they call it. Those people of course do not know what a ship requires. If the master asks for sails or ropes, or anything of that kind, they say—'Oh, you are an extravagant man, we cannot afford it, the times are bad;' and he is afraid to insist that he must get it, for fear they should turn him out: but if they knew their duty they would put those things on board."

There is no doubt of this occurring; we know of pastry cooks who club and provide themselves with schooners for the Mediterranean fruit trade; but these men act with more liberality than we may infer is the case with others, from the above evidence—they send their young officers to school to study navigation, at free cost.

A. 469. "My impression is that they were chiefly owing to the want of attention, and the want of keeping a look out on the part of the masters, and in not attending to soundings occasionally."

Q. 660. "You were understood to say that the losses of vessels are occasioned more by the insufficiency of the ships than by the incompetency of the masters?"

A. "No; I think they more generally arise from the incompetency of the masters than from the insufficiency of the ships. The masters of foreign ships are better educated, and better navigators, than our masters who exclusively belong to the east coast of England."

A. 829. "I should respectfully state to the Committee that my impression is that the means of preventing shipwrecks are, that a well regulated channel pilotage should be instituted; secondly, I consider that the channel shipwrecks might have been prevented, had there been a great harbour of refuge westward of the Downs, into which vessels caught in gales of wind might run with every facility."

This witness thinks that mistaking the lights on the English and French coasts is often a cause of shipwrecks: he thinks that is a fact generally known.

In the answer 874, the witness accounts for shipwrecks being still numerous from the circumstance of the rules being departed from which formerly guided the merchants and shipowners in timing the sailing of their vessels. Vessels now sail to and from India against the monsoons, which no one thought of doing formerly; they also proceed to Table Bay, the Cape of Good Hope, at all seasons of the year. Formerly Table Bay was not frequented between June and September. 875 *A.* "They frequently sail from Jamaica and Honduras in the hurricane

season, which was not the case formerly; that I believe is from August to January, which accountsf or a great many losses." 876. *A.* "A large commerce has been opened between Australia and the New Zealand settlements, and the various ports in the Indian and China Seas, and many vessels now annually proceed through Torres Straits, which I consider a very dangerous navigation. A great many ships are lost in those Straits. Perhaps 200 sail of ships proceed upon those voyages for every ten that went twenty years ago. In these ways I account for the great many losses which have taken place."

Q. 877. "Do you think those losses arise from the insufficiency of the ships, the incompetency of the masters and officers, or their being in other respects badly manned and built?"

A. "Decidedly not."

This gentleman's answer 890 is very remarkable—"I have very little confidence in an examination, for they may, after reading Hamilton Moore, pass the usual examination in twenty-four hours. I would be bound to teach any boy, who has passed a few years at sea, to pass an examination."

He does not think that examining Boards would do much good; nor a Board for examining into the losses of vessels. He thinks the ships in the foreign trade belonging to Britain are very efficient in point of navigation and seamanship. He thinks by examination there would be a risk of getting worse seamen, and as to the ability of masters of ships engaged in the foreign trade he thinks it quite sufficient. He thinks the ships in general are sufficiently manned. In answer 1054 he has no doubt of there being many ships commanded by men who are unfit—yet he objects to an examination!

1060. He agrees that there has been a good deal of intemperance on the part of Captains and mates; and that an examination would be good on that score. But how is the point to be arrived at? He thinks sufficient attention is not paid to the boats of the Merchant marine. He thinks there should be an examination of mates and masters of steamers as to the machinery. Then why not the masters and mates of sailing ships as to navigation and seamanship? The objection is remarkable, and appears very inconsistent. He thinks he is much more competent to examine his masters than a Board would be. We have great pleasure in giving the following, which redounds much to the credit of this witness—the greatest shipowner in London.

Q. 1132. "Do you take midshipmen?" *A.* "No; I do not adopt that plan of taking fifty guineas; I bind them apprentices and make them seamen."

A. 1133. "The plan I adopt is to have a large number of respectable boys to mess together; I have a ship bound to China now, with four or five respectable boys messing by themselves."

It is scarcely questionable that if this considerate and proper mode of treating youths who are to rise in the profession were generally adopted, much benefit would arise from it. It is highly improper to turn them among the crew, from whom they are not likely to gain either in morals or manners.

A. 1354. "From the very singular cases of wreck I have seen, which I suppose I need not particularize, and the fact of seeing the

commanders of those vessels so soon and repeatedly employed again, it has occurred to me that we shall never get the positive reasons or causes of those wrecks until there is an authorised enquiry held on the surviving parties, particularly those in charge. Complains of the incorrectness of some of the charts sold, which are worse than useless. Here is a case which must create deep reflection.

A. 1365. "I know a case of a gentleman, an Admiral in our service, who undertook to publish a chart of the coast on a large scale; he wished to have it sold by subscription; he found himself met by a member of the shipping interest, with a reply,—"We do not care about it; we are always insured." He found another party who said, "You must not make the way too clear; we are Underwriters."

It would appear that, on account of the insurance, the masters of ships do not use their own local knowledge to run into intricate ports; they wait for a pilot, and in the interim a gale may come on and the ship be stranded or wrecked.

A. 1403. (Having reference to Liverpool.) "I find that even the best charts, the best lighted or buoyed navigation, have not given that advantage to life and property which they might derive, from the restriction that the commanders of ships appear to be under of running for those channels, though they may know them from local experience, if a pilot is not on board them, even though the weather be moderate and everything favourable,—we find them heave to for days at a time, if a pilot does not come near them, though the master is certain he could take his ship in. If a ship is lost under the most extravagant circumstances, with a pilot on board, it is all well, comparatively, but if not, all the intervening means the man may have of running his ship in, he is debarred from, because he would not have credit if any thing occurred."

Q. 1404. "Do you mean to say the insurance would not be recoverable if he was running in without a pilot?" "Yes: that is alleged as the reason."

A case in point is given in proof as follows: I have known the case of a ship four days off a port waiting for a pilot; this man was up to the very beacon, and so close to the light-ship he read by her lights; he was so near along side that in the morning he sent his men in a boat to seek for a pilot; all this while there was a fair wind into Liverpool, and at last he was wrecked thirty miles off, after he got a pilot on board.

It appears that a steam boat was recommended to the authorities for the purpose of putting the pilots on board, there were seventeen for, and twenty-seven against the measure.

There is much in the details of this evidence that is interesting with respect to shipwrecks, but too long for quotation; there is also much that is worthy of attention with respect to steamers, and a Government upervision of them. He recommends the examination of masters and mates, more than one examination.*

* A correspondent says, "He cannot see the necessity for this, if only for navigation and seamanship; or why a mate, if examined, should be subjected to the ordeal a second time, when he becomes a master;" and he adds, "if a

A. 1484. "Generally the chief cause of shipwrecks seems to me to be the incompetency of the commanders. I have heard of one case in which a man has gone as a cook one voyage, and a master of a vessel the next."

Where incompetent men are thrust into such stations for which they are unsuited it must be for some special purpose best known to the owner. But I know instances of men not regularly bred to the sea, that have followed it (the two we allude to were coopers by trade,) and progressively risen to the command of vessels; and one of these, not having a family, saved enough money to purchase a snug ship, which he commanded for many years, ultimately making a fortune, and is now living, a grey-headed respectable man, in a very comfortable villa of his own.

The master of a schooner with reference to examination says:—

A. 1701. "I think many of the present captains are not capable of going through an examination, because they are not very good scholars; some of them, although they know the coast very well; and, perhaps, some that might go through an examination, might have better learning, but they would not know how to take charge of a vessel half so well as many that have had it before."

A retired master says:—

A. 1743. "I think, in fact, a great number of vessels have been lost by the Captains placing too much confidence in themselves, and not acting prudently by keeping the lead going. I can state several ships that ran ashore and that afterwards got off, that ran on shore upon course."

A. 1781. With respect to the examination:—"I think it would be useful to examine them. All men that go foreign should be examined, but in the coasting trade I doubt whether it is necessary. I do not think you would get a Board so competent as some of those men are themselves." The old captain here alludes to the local knowledge of coasts; it seems desirable that the masters of coasters should undergo a different examination from that of sea-going captains for very obvious reasons, as they do not require the knowledge of the higher branches of navigation.

A. 1832. "I think that (as many shipwrecks which take place, in my opinion, arise from the ignorance of masters, from the unseaworthiness of vessels, their being badly found, and from keeping a bad look-out,) an examination of masters, in the first place, would be a very

mate is found properly qualified for his station, so as to be able to conduct the ship in the event of succeeding to the command, why go over the same thing again? Such would be a work of supererogation, and would create annoyance without any benefit; the least trouble or expense in the fulfilment is most desirable, because it would be a compulsory act." We differ from him entirely. The mate passes a sufficient examination to avoid loss of the ship, a kind of make-shift, and barely that, perhaps, if he be not clever. This he does at his examination. What is there to ensure his efficiency on any thing happening to the master. But if he knows that before he can fill the situation he must pass a higher examination than he has done already, he will feel obliged *to keep up* his knowledge of what he has passed in, and not only that but to attain more, to undergo the higher examination, so that a very salutary incitement to learn will be kept up.—Ed. N.M.

excellent thing,—mates should undergo another examination, but not so high as that of masters."

A. 1839. "I think that there should be some plan adopted to secure the charts published by chartmakers being as good as the Admiralty charts, and in order to this, that they should undergo supervision."

This we think most desirable, for many vessels are led astray by the incorrectness of the charts which are vended by chartsellers; they all should be examined at some properly established office, and a seal or stamp affixed to those that are unobjectionable. An examination of the compasses is also recommended by this evidence,—we have shown already the necessity for this. The witness recommends the examination of the charts by a Board of examination, as there is no time to spare at the Hydrographic Office; but if it could be managed there it would certainly give more confidence, because the officers there are in every respect qualified for such a task. The expense might be met by a small charge on each chart passed; in which case an extra individual would perhaps be necessary, and so the objection would be obviated.

The same evidence, with respect to collisions:—

A. 1853. "I do not think the weather has so much to do with it (collision) as the want of look-out."

Q. 1854. "Does it arise from want of lights?" *A.* "No, I think it arises from the want of look-out on the forecastle. I think the look-out in merchant ships lately has been very bad: I have a list of about 80 ships which have run foul of each other in the open sea; none have occurred in the river; I have also here the result of these collisions, I think it is rather an interesting document."

Want of sobriety of masters and mates.

A. 1860. "Yes, while on the subject of the characters of merchant captains, I will state that it has been known at Valparaiso that they had been found lying drunk in the streets in the morning at daylight, and also that they have gone about the streets in the day time in that state, and have endeavoured to do business with agents in that disgraceful condition. That I have on authority on which I can rely. Another case has occurred of a mate bringing a vessel to anchor in a Bolivian port, when the master was holding on to the rigging, too drunk to attend to any thing."

A. 1919. (Competency of masters.) "Speaking from my own experience, I should say they are generally competent for the commands they undertake." This evidence is a shipowner of South Shields. He is not for compulsary examination: in *A.* 1924, he says:—"The situations in which merchant ships are placed are so various and complicated, it is impossible to state all the reasons; (against the measure;) but there are a number of cases in which it would be most disastrous to be compelled to have a man with a certificate in his pocket. In cases of sudden death, in cases of accident, if it were imperative, a season might be lost; in some instances the purpose of the voyage would be perfectly frustrated." He meets the proviso of exceptional clauses thus:—

A. 1925. "The exceptional clauses might go some way; but I have considered the matter with great attention, and I do not conceive if it was imperative it could be effectually carried out without great loss." Why

should examination be more difficult, or create more inconvenience in the general mercantile navy than formerly in the East India Company's Service? If clauses are introduced to meet cases where would the difficulty lie? He points out a difficulty with respect to two examinations.

A. 1957. "Yes, if the mate had been previously examined there would be no difficulty; but he might have been previously examined as a mate, not as a captain." We really do not see the necessity for two examinations; the qualifications of a mate should be so full as that at any moment after, he might be placed in command of a ship, then he need not undergo another ordeal, it would be unnecessary, and save a vast deal of trouble and expense. He does not think our ships over well manned. He thinks the men in general have plenty of room, and have their chests below. He thinks a good deal might be done by life-boats to prevent shipwrecks—this answer of course alludes to the saving of life.

In answer to question 2280. (The witness an officer R.N.) "The masters in the British navy are examined, and I see no reason why masters in the Merchant service should not also be examined; but I believe that a great deal of knowledge, and particularly coasting knowledge, is to be found among the masters of merchant vessels."

Q. 2338. (A Shipowner and Shipbuilder.) "Can you account for there being a greater loss now than during the war?"

A. "I think it is easily accounted for; we all know that during the war ships lay a considerable time for convoys; they were not so much upon the sea; we had not then the steamers to drag them out of the harbour the moment they are loaded; in fact, they are never off the sea now; we do not know such a thing now as a ship waiting for a tide; they do far more work now than they did at that time."

This may, upon the first blush be considered a very plausible reply, but, in point of fact there is no stability in it. It does not account for the losses being greater, proportionately to the amount of tonnage of the two periods,—the sea risks were the same; and looking closely at the question, we should say that the cause of fewer losses during the war was from the protecting and conducting care of the convoys. Now, the merchant ships being left to their own guidance, that care, including correct navigation, is no longer with them, generally, and hence we may trace the difference to want of due attention, or of capability in the masters.

Turn the question how you will, the answer must come back to that point. There has been vast improvements since the peace; the charts are more correct, the practice of navigation has been more closely studied, officers have become more confident from necessity and practice, yet with all these, there has been an increase in shipwrecks; the sea risks, unavoidable, being still the same. What conclusions can be drawn from these facts, but that incompetency in some way or other is the cause. By the term "incompetency," it is not to be understood that allusion is made alone to a want of knowledge in the higher branches of navigation, many other things may occasion it; the most skilful navigator and seaman may be incompetent to the command of a ship if he is deficient in other qualities besides talent.

With respect to the strength in the build of ships, the owners would probably resist any public measure for its regulation, although from what has been stated in the Report, such seems to be often required. The unseaworthiness of vessels without reference to their scantling or build is a point very difficult to arrive at. One of the witnesses observes truly that, you cannot see through the vessel's sides. One man's casual, or even careful examination with respect to the soundness of the hull cannot be depended upon. He may judge correctly when a ship is too deeply ladened, or when deficient in stores and necessaries, but he may be deceived in his opinion of her soundness.

There would be less objection, perhaps, given to a Government Registry Office; certain facts as they occur being sent there for record, such as when a ship is launched, when repaired, and to what extent, when new coppered, when docked for inspection, when getting on shore, light and load draught, &c.

Underwriting is a very curious, and as one of the evidences states, a contradictory affair. The fewer vessels that are lost the more profit derived by the insurer, yet his calling is perpetuated by the loss of ships. He lives by the risk which vessels run of being lost. Hence the truism that, if there were no losses there would be no insurers. It is evidently from the consideration that ships will be lost that societies of that description are formed, but as an abstract point it does not involve any moral delinquency; yet, from the difficulty of the insurers obtaining correct information of the real value of ships and the consequent assurance of these above their value, without difficulty, unprincipled owners are tempted to desire the loss of their vessels; a fact proved in the course of the investigation.

The difficulty of arriving at just conclusions in these money transactions will be apparent from the following selections:

"The risks at a moderate premium are profitable ones."

Q. "In time of war premiums rise so as to completely cover, or, more than cover the risk?"

A. "More than cover the risk."

Q. "The trade of the underwriter is better in time of war than in time of peace in consequence?"

A. "I should think it is?"

Q. "Is it not clear the trade of the underwriters must thrive in the exact proportion to the risk to be run?"

A. "Certainly."

There is a difficulty presents itself here, in making out exactly what opinion is intended to be given. The risks at a moderate premium are the profitable ones; yet, in a time of war when premiums were high, risks great, the former more than covered the latter, and, therefore, may be supposed to be profitable. It may not be exactly a contradiction, but it amounts to this: that under either circumstance the trade, a speculative money-hazard of the underwriter is a thriving one. It certainly does appear an extraordinary phenomenon that, the risk of absolute loss should tend to bring in profit; the doctrine of probabilities may in these cases serve, and the chances, from conflicting interests, may preponderate on the one side or the other, according to contingencies

which may arise from natural causes, or from wilfulness; but, let the result be what it may the fraternity would seem to thrive;—auger holes,—abandoning ships at sea, which are still able to float,—purposely running upon rocks or shoals, do occasion a temporary loss of money on the one hand, but then, the careful and upright skippers, by their integrity bring it up again to the insurer, whilst the rogues, if not detected, reap their harvest too! Whilst men run a tilt with Mammon, at all hazards, it would be a difficult matter to prevent entirely, by enactments, such disreputable practices.—Theives pick pockets under the very gallows where their fellow practitioners are hanging!

The apparent contradictions of the evidence are remarkable; underwriting it would appear, from the answer 2034, has been "very unprofitable since the war." Premiums were before the peace, as high as from 40 to 75 per cent! The risks were exaggerated, possibilities are never lost sight of in these matters; but, in fact, as ships generally sailed under convoy, the risk of capture from the enemy, was doubtful, and rested on two circumstances—the care of the master, and the rate of sailing of his ship. The loss from shipwreck was less in time of war, as the vessels were conducted by their convoy into, or to the threshold of their ports. Since the peace, the frequency of vessels running on shore has increased with the increase of tonnage; and from the commanders no longer having a guide; the risk, therefore, on that score has increased rather than diminished, yet premiums are comparatively low, and, we are told unprofitable. How is this to be reconciled to the former opinion that "risks at a moderate premium are the profitable ones?"

The attraction of the land upon ships was a phenomenon much dwelt upon at one time; the principle or philosophy of the matter has never been clearly made out; but here we give a circumstance equally as curious, and, perhaps, less difficult to be accounted for, without blending it with the physical problem above stated. At Yarmouth, in Norfolk, from 1835 to 1836—36 brigs, 1 ship, 7 barks, 4 schooners, 4 sloops, 3 galliots, 3 keels, 1 steamer, and 2 vessels, class not given—in all 61 were wrecked! Here is another curious document purporting to be a list of British and Foreign vessels lost, abandoned, broken up, &c.

1832	British	345	Foreign	139
1333	"	626	"	185
1834	"	432	"	158
1835	"	594	"	158
1836	"	284	"	115

Shipwrecks are also attributed to the want of havens or refuge harbours; a good deal of information on this head is to be found in the Report, but the space which the *Nautical* can afford is so limited that we must be brief on the subject. Several places have been named as desirable for the purpose: one to the eastward of the Downs, within the Brake Sand, where there is twenty-four feet water at low spring tides, or rather more, according to Sir John Rennie, who says—"I think a harbour there for the larger class of merchantmen, and for vessels of twenty-four feet water, might be made with very great safety." A refuge harbour in this direction is certainly required; in

fair weather the Downs is an excellent and commodious resting place; but experience has proved that there is little security there, notwithstanding the great natural breakwater, the Goodwin Sands, during hurricanes. Trinity bay on the Goodwin has been named; westward near Beachy Head; off Dover; Portland bay; and in Mount's bay; and we would add that one at the Scilly islands would be of the greatest benefit to navigation, especially during a war.

Various are the plans proposed; some projectors advice floating breakwaters which they affirm will afford smooth water within them; but, of these, if placed on an open coast, we presume, not to entertain a very favorable opinion. It appears to us that Mr. Cubitt's plan of solid piers is far preferable, although, necessarily, more expensive; and the sand over the chalk bottom off Dover is said to be good, and of sufficient depth to afford security to the anchor. An enclosed anchorage there would be desirable, for steamers especially, during a war; but, if it could be accomplished, Portland Road certainly is the place of all others, from its situation opposite Cherbourg, that we should point out as the most eligible site for a grand national port for vessels of war.

The subject of havens, whether for refuge, or for rendezvous for cruisers, is one of vital importance to the interests of the nation, with reference to our maritime commerce; and it is truly a matter for wonder that we should have allowed *thirty* years of peace to have passed without any efforts having been made to secure these advantages to the national shipping. The security arising from a continued period of tranquility, should not be allowed to blind us, to the absolute necessity that exists for providing secure places of retreat to our vessels in the event of a war. Mutation is inevitable: a time must come when the pacific ruler of our continental neighbour will be "gathered to his fathers," and there is no knowing what turn affairs may take when that unhappy moment shall arrive; and it cannot be denied that the period of profound peace is the most fitting for undertakings of the sort: in fact, if we leave the adoption of these necessary measures until symptoms of hostilities become apparent, we shall then find so much to occupy the mind, and employ the finances of the State, that it would be too late to give that attention to the subject that it requires.

Any future war will be carried on in a very different manner to those which have passed, and unless we are prepared to meet the change, our maritime commerce will be very much interrupted. It appears demonstrable that by having secure retreats for our shipping, vast as the outlay would be, the adoption would be the most economical plan; it would be but one expense, whereas a national defence of our mercantile shipping, by our "wooden walls" lining the entire coasts of the Channel, would be of continued costly amount.

The formation of rendezvous, and refuge harbours being of paramount importance to the nation, we sincerely hope the Government will take the matter up in "right good earnest."—A thousand other things may be postponed without detriment to the State or to individuals, but in these matters delay may create difficulties and troubles to the individual supporters of the national wealth, and, eventually, to the whole community, that years of regret and exertion would not re-

medy. The revenue is now improving: the expense attending these measures would be extra, if the surplus income of the State be insufficient to meet the annual outlay, why not keep on the Income Tax, or rather create a tax on property, graduated, so that every man, not absolutely a daily labourer, should pay according to his means?

It may appear presumptuous in us thus to speak, but we are sure, on account of the extreme importance of the subject, we shall stand excused. In grand national undertakings of this sort, opinions given with honest intention are desirable, and the voice of patriotism will never be disregarded even by those whose judgment may be sound and whose wisdom may be profound.

Ship-Masters, Ships' Articles, Log Books, etc.

Since my several commentaries in reference to these matters, to which you have given publicity, a deputation of gentlemen, on the subject of remodelling the laws relating to our Merchant Service, having been favourably received at the Board of Trade, I am induced to recall attention to my late complaints and suggestions, and particularly on the present useless, incomprehensible chaotic document termed the ship's log, and to the existing form of ship's articles, equally controvertible and valueless to the owner, the interests of the ship, the discipline and character of the sailors, &c. I wish to be understood as referring more especially to the causes and effects thereof in the Colonies. There the owner cannot interpose in person, and there the law has to be expounded for justice by inexperienced persons, and the agents are set at defiance by parties whose objects and designs may be at variance with the truth and interests of the ship and of the owner. He has nothing but the Articles to create the slightest control on the men, who well know that pseudo-philanthropy is too often with them, and that if they can only obtain a ship here, come what may, or do what they will, howsoever ruinous to their employer they are sure to be better off by quitting in a Colonial port, as I will shew and have heretofore demonstrated, more particularly in reference to Salvage matters.

As it would be supererogatory to recite the many instances and ways, I will confine myself to the facts that ship's articles are not held efficiently sacred nor sufficiently binding on the feelings, conduct, and future interests of the ship's company. Neither are they generally dealt with as they should be in respect to the interests of the ship owner, whose voyage and objects are so mainly at the mercy of the master and men he pays, feeds, &c., and whose ship and property are held *à priori* responsible for and to them.

I do not myself see why the owner in such position should not be equally a party binding the ship's articles, in which it is held that he has no power contrary to the will or caprice of the master. I refer to two cases only of many within my knowledge (irrespective of that above alluded to) the one occurring in Jersey, the other in the Falkland Islands: in the first, after the ship's company was completed and the vessel ordered to sail, the owner was compelled to dismiss the master, who thereupon influenced the crew to strike, telling them that his dis-

missal vitiated the articles, and that they were no longer bound thereby. They consequently adopted his advice and the result was that a fresh crew had to be procured, the owner losing the amount of his advances, &c. In the second, the vessel was fitted in London, the Articles signed for the voyage from and back to London, specially binding the masters and crew to the orders and powers of the Agent, in the Falklands, who after many cautions and admonitions to the master, for inebriety, neglect, and disobedience, whereby several losses and accidents to the vessel had occurred, was compelled to dismiss him from the ship, paying him nevertheless his wages, which attained, he urged the crew to strike and to mutiny for full payment to the day, which, the Governor of the settlement, upon being applied to, ordered; notwithstanding that the Articles specified otherwise. To this the agent was forced to submit, when the crew quitted and refused to rejoin unless at Colonial wages and on their own terms, in which the Governor upheld them, alleging that the Agent had not the right to enforce the Articles after he had dismissed the master therefrom, and with much difficulty and insult from whom could the Agent obtain the log-book, &c.

Now, for the consequences. No seamen were to be obtained on the island, where the Government was hiring all hands for shore work, at wages varying from £60 to 80 per annum, with full rations, &c., and of which several of the men availed themselves, and only by the Agent shipping landsmen in his own employ could he recomplete the vessel's crew.

By directing attention to these points, of embarrassment to the owners and agents, and of disregard to mutual interests and discipline, the parties who have now associated for the purpose of approximating our Mercantile marine to that of our Navy, will not object, in the highly important national subject they have in hand, to receive for their consideration any remarks made with the intentions instigating

G. T. W.

The Anchor.

The safety of ships depends, in many cases, entirely upon the efficiency of what seamen call the "ground tackle," viz. upon good anchors and cables. Chain cables are more to be relied upon than their hempen cables. The chain neither rots nor gets chafed by rough ground at the bottom. An iron chain cable is generally stronger than the hempen cable for which it is a substitute; and on their general adoption it was found necessary to improve the strength of the anchors, and, if possible, to do so without increasing their weight. The anchor, accordingly received sundry changes in its shape, and new proportions of the metal in its various parts. The shank has been shortened and the arms strengthened, and many of these changes have not turned out to be improvements! It is desirable that a ship's bower anchor should be sufficiently strong to ride the ship, not too heavy for the men to easily manage, or the ship to carry; and, yet possess the important property of penetrating the soil at the bottom, as the tension upon the cable is augmented, even, although the scope of cable should not be very great! Now, when the weight of an anchor is given, it is evident there must be some form, and some proportion between the various parts of an anchor better

than any other, for ensuring a maximum of *strength* to resist fracture, and a power to penetrate into the anchorage ground as the strain upon the cable is increased. If the arms of the anchor make an improper angle with its shank, or if the *palm* of the anchor be either badly formed, or improperly proportioned, the anchor will not enter into the soil at the bottom; or even if it do take a partial hold under certain conditions, say in smooth water, and with *a long scope of cable*, yet a *badly formed anchor* will start when the sea gets up, and the ship begins to pitch and jerk upon her cable! There are some anchors that will not take hold again, if once they start in ground of a particular tenacity; for example, if a large palmed anchor start in Portland roads, such is the stiffness of the soil that large lumps adhere to the palm of the anchor, and prevent the machine from taking hold a second time; and, hence the *old custom among experienced coasters* to lubricate the large flukes of their anchors with *slush*, (*tallow*,) in order that the lumps of clay might slip off, should the anchor rise out of the soil in a gale of wind, instead of penetrating to a greater depth, as a properly proportioned anchor should do.

Anchorage ground is generally of sand, gravel, clay, or mud, and in all these soils the superstructure is loose, light, and easily moved, but as we descend we find the density of alluvial soils increase with the depth in a duplicate ratio. If a crow bar, or a wooden stake be driven into sand or mud, we find they resist a vertical force of considerable amount; how much more, then, must the *crooked arm* of an anchor (with a palm so formed as to augment its penetrating power,) resist horizontal motion?

The philosophy of anchors and anchorage ground should be better understood. The holding power of an anchor, when other things are equal will be directly as its weight; but the power of holding will augment *in a compound ratio* as it penetrates into the ground, when it descends into clay or mud, so that the superstructure is thick enough, and *tight enough* to keep out the water from above; the fluke and arm of the anchor, if they move in a horizontal direction, must leave a vacuum behind; because there is:—*First*,—the weight of the mud; *Second*,—the weight of the superincumbent column of water from the bottom upwards;—*Third*,—the weight of the atmosphere pressing upon the sea surface. These forces are so great, that experience teaches us that an anchor, when once buried in a tenacious soil, never starts? Seamen know how very difficult it is to way an anchor under such circumstances, even when the cable is "up and down." They mount the windlass and swing off from the ends of their handspikes, singing out "Heave? heave together! heave hard! heave, and water his hole!" That is, only raise the shank *so that the water may get down to the arm of the anchor*, and relieve it of the enormous superincumbent pressure.

Our habits and our prejudices often get the better of our reason; we look upon a fine, large palmed anchor, as an excellent machine for riding a ship; but we are apt to forget that the anchor must first descend into the soil at the bottom of the sea. A large palmed, but otherwise a light anchor, requires a long scope of cable before it will *bite;* and if the ground be hard or tenacious, it may refuse to take hold altogether. It is even possible, and very probable that a good stream

anchor of great penetrating power, may bring a ship up sooner than a badly formed bower anchor of four times its weight. The large lumpy ill-formed machine scrapes along the surface of the ground, whilst the lighter but better formed anchor dives into the ground, and descends into it in proportion as the strain upon the cable is augmented. It is beyond a doubt that anchors differ greatly in their holding qualities. Experience has demonstrated that the anchors of Lieut. Rodger's plan combine strength with the valuable property of diving into the ground, instead of dragging along the bottom. As a machine for hooking on to the bottom of the sea, and retaining a ship in her position, Rodger's anchor has not been surpassed, but its *appearance* is not in accordance with the opinions we have been taught to believe is the best form for an anchor! Its small palm would induce one to believe that such an anchor could never be a good one; but, the fact is, that this palm is big enough for fishing the anchor, and just large enough, and of such a form as to cause the arm to dive into the mud, where we have shewn the tenacity and adhesion of the soil must be enormous.

When chain cables part near to the ring of Rodger's anchors, as I have witnessed, it is very difficult and frequently impossible to recover the anchors, because they dive down below the surface of the anchorage ground, and, therefore, cannot be swept by ordinary means. On the other hand, the readiness with which they enter and take hold of the bottom, enables a ship to bring up with a *very short scope of cable,* at times when the old anchor would not prevent a ship from drawing ashore, or athwart hawse when pinched for room to veer cable.

W. Walker, *Master, R.N.,*
May 10th, 1844. *Queen's Harbour-Master, Plymouth.*

Destruction of the Ship Palestine.

Accounts have been received of the destruction of the ship *Palestine,* 800 tons, by fire, on the 4th Feb. in lat. 26° 15′ S., long. 58° 35′ E. She was bound to Aden, Bombay, and Calcutta, with a cargo, consisting of several hundred tons of coals, tar, pitch, and pine deals, which was taken on board at Newcastle. On the first suspicion of fire the master Capt. M'Lean, ordered some of the men to force an iron rod through the coals to the bottom of the ship. There it was allowed to remain some minutes, and upon its being withdrawn, a portion of it was found to be red hot, clearly indicating that there was a large mass of fire raging about six or eight feet from the bottom. Capt. M'Lean cheered his men up to attempt to reach the fire, and no time was lost by them in having the cargo on deck and throwing it overboard, in order, if possible, to get at the fire, but no one could remain below. It was then determined to pump water into the hold, so as to swamp the burning cargo, for which purpose all the pumps were put into active operation, and powerful streams were poured down. This, however appeared to have not the least effect, for the fire burst up out of the main hatchway with terrific force. They were at length forced to quit the pumps, the deck becoming so hot, and to take to the boats, which had previously been provided with provisions and water, and launched overboard. Capt. M'Lean took charge of the long-boat, and chief mate the cutter, with twenty men in each of them. They remained by the burning wreck for some time, and until the ship suddenly gave a heavy lurch, and disappeared head-foremost. After enduring the most severe privations, Capt. M'Lean and his party of men were on the 7th day picked up by the brig *Solway,* which landed them subsequently at the Cape of Good Hope. The other boat's crew separated and has not since been heard of.

The Pendulum Marine Artificial Horizon.—*Invented by A. B. Becher, Commander* R.N.

(Continued from p. 297.)

It will be as well now to make a remark as to its construction. In most of the instruments yet made, the angle formed at the point of suspension of the pendulum between it and the horizon vane, is some few minutes more or less than a right angle. Some makers have succeeded in avoiding this, but it is of no importance, as it may always be found by measuring any known angle of elevation of an object, the difference between this and the angle obtained with the horizon, being a correction to be applied like the index error of the sextant to the observed angle; additive if less, and subtractive from it if greater. Although the maker of the horizon may profess it to contain no error, and therefore will require no correction, still it is recommended to ascertain the fact by observation, always with a new horizon, and occasionally to repeat the experiment afterwards, in order that the observer may be quite certain of being able to obtain always the true angle.

In doing this it will be unnecessary to attend to the index error of the sextant, as this must necessarily enter into any angle of elevation measured with the horizon. If the angle, by which it is to be determined, be measured with the same sextant in a reflecting horizon of mercury, the index error must be applied to the observation to obtain that angle. But in measuring the same angle with the pendulum horizon attached to the same sextant, the angle observed would necessarily include the index error (if any), and it may therefore remain, and be included in the correction for the horizon, instead of making two operations, first by applying the index error of the sextant to any observed angle, and then the correction for the horizon.

To find the correction for an horizon, the angle subtended by the summit of a monument was observed to be 18° 45′ 20″ by the mercurial horizon, the index error of the sextant being + 1′ 45″ and the angle of elevation of the same monument from the same spot by the pendulum horizon was 9° 30′ 30″. The correction, therefore, was thus found.

	°	′	″
Angle by reflection	18	45	20
Index error	+	1	45
Half	18	47	5
True angle of elevation	9	23	32
Angle by Pendulum Horizon	9	30	30
Difference is correction subtractive	0	6	58

The correction is here subtractive because in excess, and briefly it might be called 7′ 0″.

In observing the altitudes of terrestial objects on shore, it is advisable, if possible, to avoid those which terminate in sharp points, in

consequence of the difficulty of determining where the point really is in the reflected image. Any thing approaching to the appearance of a ball such as the sun's disc is the best object for observation, as the line of the horizon forms a tangent to it, as the sea horizon does to the edge of the sun's disc.

It is not recommended to determine the correction with the sea horizon, but to do it always before embarking. If it be done at sea the dip depending on the height of the observer's eye must be applied to the observations with the sea horizon. Thus, suppose the sun to be observed for the correction as in the following observations, simultaneous ones being made with another instrument.

Sea Horizon.	Pendulum Horizon.	Difference.
Sun's ob. alt. cor. for dip. and Index error.	Sun's obs. altitude.	Excess Subtractive.
° ′ ″	° ′ ″	′ ″
44 4 20	44 13 0	8 40
45 30 10	45 36 40	6 30
47 29 20	47 33 10	3 50
49 51 20	49 59 20	8 0
53 15 30	53 23 10	7 40
		34 40
	Mean correction	6 56

Subtractive because in excess. The foregoing observations were made while the ship was in motion at sea.

The following were made on shore for the correction of another instrument.

Mercury Horizon		Pendulum Horizon.	Correction Subtractive.
Sun's alt.			
° ′ ″	° ′ ″	° ′ ″	° ′ ″
29 22 30	14 41 15	15 23 20	0 42 5
25 40	42 50	25 20	42 30
30 10	45 5	27 0	41 55
37 20	48 40	29 50	41 10
40 0	50 0	30 30	40 30
42 0	51 0	31 20	40 20
			8 30
		Mean	41 25

The foregoing observations are given with the view of shewing the method by which the correction was obtained at sea and on shore, and are selected from the earliest observations with the first instrument that was made, and before it had reached its present improved state.

The correction may also be found by observing the meridian altitude

of the sun, and finding the latitude of the place when this is well known; the difference between that found and the true latitude being the correction required. With this view the following observations were made at the Admiralty in the month of June 1843, with a five-inch sextant of Carey's divided to twenty seconds, to which an horizon was fitted.

	12th. ° ′ ″	13th. ° ′ ″	16th. ° ′ ″	20th. ° ′ ″	24th. ° ′ ″
Obs. alt. Sun's L.L.	5 9 0	57 23 40	58 7 40	59 0 20	59 49 0
Refr.	0 33	0 33	0 32	33	32
	57 8 27	57 23 7	58 7 8	58 59 47	59 48 28
Semi-Dr.	15 51	15 51	15 51	15 51	15 48
True alt. L.L.	57 24 18	57 38 58	58 22 59	59 15 38	60 4 16
Zen. Dist.	32 35 42	32 21 2	31 37 1	30 44 22	29 55 44
Declin. N.	18 2 33	18 17 37	19 0 57	19 54 15	20 42 9
Appr. Lat.	50 38 15	50 38 39	50 37 58	50 38 37	50 37 53

	30th. ° ′ ″
Obs. alt. Sun's L.L.	60 49 40
	32
	60 49 8
Semi-Dr.	15 48
True alt. L.L.	61 4 56
Zen. Dist.	28 55 4
Decl. N.	21 43 17
Appr. Lat.	50 38 21

The above six results for correction.

′ ″	° ′ ″	
38 15	50 38 17	Appr. Lat.
8 39	51 30 21	True Lat.
7 58		
8 37	0 52 4	Correction Subtractive.
7 53		
8 21		
49 43		
38 17		

The correction being obtained by either of the above methods it is then to be applied to all observations.

The following observations for latitude were made in the Gulf of St. Lawrence, and also those for time on the Middle Ground to the northward of Sable Island, on board H.M.S. Cornwallis 74.

	Pend. Hor. ° ′ ″		Sea Hor. ° ′ ″
Observed Meridian Alt.	57 58 0		57 58 30
Correction of Pend. Hor.	6 56	Ind. cor,	1 00
	57 51 4		57 57 30
S. D.	+ 15 48		+ 15 48
	58 6 52		58 13 18
R.	— 31	Dip. & Refr.	— 5 41
	58 6 21		58 7 37
Z. D.	31 53 39		31 52 23
Declin.	15 53 2		15 53 2
Lat.	47 46 41		47 45 25

The following observations were taken also for chronometer.

Time. h. m. s.		Sun's alt. Sea Hor. ° ′ ″		Sun's alt. by Pend. Hor. ° ′ ″
8 50 23		40 30 30		40 32 0
52 03		47 50		46 10
54 14		41 9 20		41 10 20
56 4		26 30		30 40
57 57		44 20		49 50
20 41		38 30		49 00
8 54 8·2		41 7 42		41 9 48
	Ind. Er.	1 00	Pend. cor.	6 56
		41 6 42		41 2 52
	Sem. D.	+ 15 49	Sem. D.	+ 15 49
		41 22 31		41 18 41
	Dip. & R.	— 6 1	Refr.	— 58
	True Alt.	41 16 30		41 17 3

Of course both nearly gave the same longitude.

Thus far our observations are made in daylight: we have now to treat on those obtained at night with the aid of the lamp, affording more numerous opportunities for observation, and results as satisfactory as those by day. The lighting of an horizon attached to a sextant may appear to be a novel proceeding; but, on being acquainted with the instrument, and the management of the light, so as not to overpower the ray of a bright star while the horizon is sufficiently lighted, the observer will, perhaps, be more satisfied with his night observation than that obtained by daylight.

In Harwich Harbour, on board H.M.S. Fairy, the following observations of the moon's meridian altitude were made at night by the lamp, when no horizon of the sea could be seen.

1839.—Nov. Sat. 16th. Moon's LL. ° ′ ″	Mon. 18th. Moon's L.L. ° ′ ″		′ ″	′ ″
35 54 0	49 59 0	Hor. Par.	58 53·6	60 33·3
Pend. Cor. 0 9 26	0 9 26	Change	0 17·3	0 14·7
Moon's A.A. 35 44 34	49 49 34		59 10·9	60 48·0
Sem. Dr. + 16 17	+ 16 46			
36 0 51	50 6 20	Declin.	1 31 8·1	12 31 41
Cor. + 46 35	+ 38 13	Change	— 14 32·6	+ 9 25·8
			1 16 35·5	12 41 6·8
T. A. 36 47 26	50 44 33			
Z D. N. 53 12 34	39 15 27			
Decl. S. 1 16 35	N. 12 41 7			
Lat. 51 55 59	51 56 34			

The correct latitude of the anchorage is 51° 56′ 45″.

The following observation is from a report by Captain Hewett, on the original instrument in 1834, at night, when no horizon of the sea was visible, while standing up sea reach in the River Thames.

Observed meridian altitude of Jupiter, horizon lighted by the lamp.

	°	′	″
	59	29	0
Correction of Pend. Hor.		38	0
	58	51	0
Refr.			34
True alt.	58	50	26
Z. D. N.	31	9	34
Declin. N.	0	19	4
Latitude	51	28	38

The vessel was in the mouth of the river Thames, in latitude 51° 29′ 50″, when the foregoing observation was made with the instrument in its unimproved state.

The foregoing shews that the latitude may be obtained by the sun at noon, by the moon and planets with the aid of the lamp at night, and as near to the truth as if the horizon of the sea had been used instead of the Artificial Horizon. The value of such observations to a ship homeward bound, and making the channel, will be appreciated by those who know their importance.

But in the midst of the ocean where the waves rise in proportion to the strength of the wind, there are degrees of motion in a ship so excessive in violence, as to forbid all attempts at observation with an instrument which such motion must necessarily affect.

A perfect Marine Artificial Horizon to act independent of the observer, and to preserve its level under all possible circumstances with regard to motion, in which it may be placed at sea, may, therefore, be long, and, perhaps, in vain sought for; but it does not follow that one to be formed with the assistance of the observer, while he is making his observation in moderate degrees of motion, should be so inaccessible. A ship is not always in violent motion, and there are circumstances of weather and sea in which such an instrument has its value, in which an experienced observer will have no hesitation in using it with confidence. It is unnecessary to particularize such situations. The mouth of the English Channel in a southerly wind, it is well known to every seaman, affords ample opportunity for the use of such an instrument, besides other parts of the world, where to obtain an observation, for latitude especially, is of so much importance, and when that observation cannot be obtained with the sea horizon.

When it is considered how much the correctness of the observation depends on the experience and tact of the observer, even with the sea horizon, as well as with the reflecting one of mercury, when he has nothing to do but to observe the contact between the sun's limbs, how much

more must it depend on that tact and experience to get a good observation on an horizon, which the observer has to perfect, before he can observe a contact upon it.

Hence it would be unreasonable to expect excellence at once. Experience is required in observing a lunar distance, and it is not less required in using the pendulum horizon; and when that experience is obtained, a familiarity with the instrument will follow, and a confidence in it will be acquired, that the observation obtained with it is sufficient, under circumstances, for the safe navigation of the ship, whereby she may possibly be saved from destruction with the lives of all on board.

A ship in a roadstead, harbour, or river where observations for latitude and chronometer are desired without the necessity of landing; where from the water being undisturbed by the ocean wave, her motion is scarcely perceptible, and where no other horizon is available, may obtain these observations with as much precision as if they were made with the same instrument on shore.

And on shore where entire freedom from all motion is secure, either by resting the instrument by hand on its staff, or fixing it on its stand the foregoing clearly shews that an observation even with so small an instrument as a five-inch sextant, cut to twenty seconds, an observation for latitude may be obtained, which will not deviate more than three-fourths of a minute from the truth (see p. 350). To the traveller it presents great advantages. He may sit in his boat at anchor in the stream of a river, and get his latitude at noon, and his observations for chronometer without landing; he may determine the elevations of the principal heights near his encampment, or by the angle of depression from the summit of any of them he may also ascertain that height; and at night when a multitude of stars afford him the opportunity, he may determine his latitude with the help of his lamp, conveniently and compactly stowed with his instrument, without burthening his luggage with the cumbrous mercurial horizon, liable to waste, and without being troubled whether a star is too low for reflection, or so high that its altitude will not come within the limits of his sextant.

On the use of the Pendulum Artificial Horizon on shore, or afloat, to determine the heights and distances of elevated objects.

Independently of the use of this horizon for Astronomical observation, the application of it to the sextant for trigonometrical operations opens a wide field for interesting and useful amusement. The angle of elevation of a terrestial object above the horizontal plane, as seen from any station, being known, its height is readily found, provided its distance from the station is also known, and this can always be ascertained by a very simple process. On shore this angle is measured by the expensive means of the theodolite, an instrument mostly confined to the surveyor, and afloat the sea horizon (not always available) affords an uncertain means of observing it with the sextant, so that to obtain it is attended at least with difficulty, and hence the heights of conspicuous objects on the shore of an anchorage or harbour, which, were they known, and inserted on the plans of them, would prove highly useful in many re-

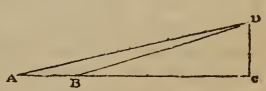
spects, are very scantily given. The Artificial Horizon here described, affords an easy means, always at command, of obtaining this angle, and indeed adapts the common sextant to the purpose of the theodolite, on shore or afloat, for angles of elevation.

Every seaman knows the height of his ship's masthead, and consequently, by observing the angle subtended by it from any station near it, either on shore, in a boat, or in another vessel, obtains at once his distance from it. If his station be in the direction of an object, as seen from his ship, the height and distance of this object being required, the angle of elevation of that object from the ship and from his station, with the masthead angle of his ship from the latter, is all he requires for the distance and height of the object. If again the station be not in the direction of the object as seen from his ship, two horizontal angles from the ship and his station to the object, and the angle of elevation of the object as seen from the ship, and also the masthead angle of the ship from the station, in like manner give the distance and height of the object. And, again, if the object be not very far from the ship so that her masthead may subtend a sensible angle from it, two angles from the ship, one from the deck, and the other from the masthead, will also give the distance and height of the object. Thus the sextant with the horizon attached to it, acquires additional value from the many purposes to which it may be applied, and affords the means of employing usefully many leisure moments in satisfying useful enquiry. The common mercurial artificial horizon, or any other fluid horizon is of no use in obtaining small angles of elevation, the reflection not being available for angles under 8°, and it cannot be used afloat. Hence the great advantage of the pendulum horizon, as it at once supplies the means of observing any angle of elevation, however, small or large it may be, in combination with the sextant, and is available for observation either on shore or afloat. From the summit of an elevated object it also supplies the means of observing an angle of depression, as far as the limits of the graduation of the sextant off the arc will allow.

The foregoing conditions resolve themselves into the following cases of plane trigonometry. It is unnecessary to quote examples of their application to practice as the process of calculation, after the elements are obtained, is known to every one. But it may be worth while to illustrate them with the following.

Case 1.

The height of a light-house or any other object seen from the vessel is thus found.



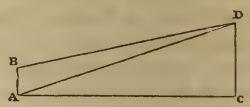
In the annexed figure the angle of elevation of the summit D is observed on board at A, and in a boat (or in the same vessel) in the direction from A towards it, a second angle of elevation is observed at B. If the second angle be observed in the vessel, the distance A B must be measured by the vessel's run; if in a boat, the distance A B may be found by measuring the mast-head angle of the vessel.

Then in the triangle A B D, the three angles, and A B are given. Therefore, log A B + sin ∠ A − sin ∠ D = log B D, and in the triangle B D C, log B D +sin ∠B−10=log CD the height of the lighthouse. In this case as in the

others the height of the observer's eye above the surface of the water must be added to it, as the instrument gives the angle above the horizontal plane to which it is raised.

Case II.

The same height may be determined by using the mast of the vessel as a vertical base.



In this case the angle of elevation at A is observed on board from the deck, and that at B at the masthead of the vessel. If the top of the light-house be found to be on the same plane as the masthead, the instrument shewing no angle of elevation or depression, it is clear that the height of it must be the same as that of the masthead of the vessel. If it be above it, the angle of elevation added to 90° will give the angle at B. If it be below the plane, observe the angle of depression, and subtracting it from 90° will give the angle at B.

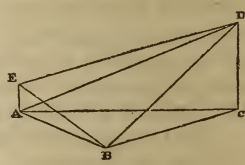
When the object is below the horizontal plane, reflect it up to the horizon by moving the vernier in the direction *off the arc*.

Then in the triangle ABD, the three angles, and a side AB are given as before. Therefore, log AB + sin ∠ A − sin ∠ D = log AD, and in the triangle ADC, log AD + sin ∠ A − 10 = log CD.

This case is particularly applicable in large ships where the height of the masthead is considerable, and which might be again increased by observing the lower angle from a boat alongside or from a lower deck port.

Case III.

The third case consists in simply deducing the base, for the *distance* of the light-house, out of the line of direction between it and the vessel; and where the distance of the light-house is greater than in the other cases, is preferable in practice.



In the annexed figure, on board the vessel at A the angle of elevation C A D of the object is observed with the horizon; and also the angle of elevation C B D at B, which may be from a boat or another vessel. At the same time the horizontal angles B A C and A B C are observed at A and B, and the distance of B from A is found by observing the angle A B E, or, elevation of the masthead of the vessel. A B then serves as a base to find A C or B C, and with the angle of elevation of the object at A or B, the height of C D is found as before. At B the angle of elevation C B D need not be observed, but the masthead angle of the vessel must be obtained from it to find the base A B.

The base A B may, if preferred, be measured by the vessel's run, where the tide does not prevent it, and the horizontal angles obtained by steering for an object on shore, or by two bearings with the intermediate course and distance, as given by Mr. Raper, in his Navigation, the height of the lighthouse depending on the angle of elevation.

Thus the height of any object, as an elevated building, which may be useful as a sea mark, may be readily found.

The opinions of several experienced officers* on this instrument are already before our readers; we shall, therefore, close this account of it by adding the few following:—The first, that of the late Capt. Hewett,

* Capt. Beechey, R.N., p. 187; Capt. Cook, p. 188; Mr. Bailey, p. 235; Mr. Davy, p. 235.

who used it in the Fairy several years ago, which conveys in a few words the whole character of the instrument, and which is incontrovertible, fully confirms the opinion which the inventor has formed of it, and has again been amply confirmed since by those of other officers, besides those above alluded to whose position and professional experience and attainments render their opinions the leading guides in such matters among seamen generally.

Captain Hewett says:—"I have frequently observed with this instrument, and have found no reason for disturbing my favourable opinion of it. A motion may certainly be kept up in a vessel, at or beyond which, it is impossible that it can be held sufficiently steady to form the Artificial Horizon to the satisfaction of the observer, as I still uniformly find that the difficulty of using it keeps pace with the increase of motion. But there are thousands of instances short of this excess of motion in which it can be used with great advantage, and in moderate weather to a near approximation of the truth, when no other means could be devised for ascertaining the latitude of a ship, upon which her salvation may, perhaps, depend."

Captain Sir Thomas Hastings, R.N., commanding H.M.S. Excellent at Portsmouth, states his opinion thus respecting it.—

"I still entertain the opinion I expressed to you, that the Artificial Horizon you have invented, will be found beneficial in the naval service. The principles on which you purpose to extend it are clear and true, and, I should think, good and careful observers would obtain close approximations.

"I cannot close this without expressing my hope that we shall see your Artificial Horizon brought into general use. Everything which requires some skill, a good deal of attention and patience in the using, makes its way slowly. Good observations obtained by it will count for the half yearly examination at the College."

And in a subsequent communication he adds:—

"I entertain no doubt that good useful results will be obtained by those who choose to take pains, and who have patience and perseverance to go through the necessary practice to become masters of it; nothing is done by the general run of persons who will not apply."

Captain Trotter, R.N., who commanded the late expedition to the Niger states as follows:—

"Your Horizon was used on board the Albert and Wilberforce, and, I believe in the Soudan too, and much approved of, though the early appearance of sickness prevented us doing much with it. There never was an occasion where its value could be more appreciated, it being inconvenient in general to land at noon, and often impracticable to do so on other occasions; and the common false horizon was of course useless in the Niger at noon."

Commander Matson gives his opinion in the following letter, with the accompanying observations. The reader will at once perceive the closeness of these observations, and the successful result of the observation of the star Regulus by the lamp.

25, *Westbourne Place, Eaton Square, May* 1*st*, 1844.

I have great pleasure in expressing my very favourable opinion of your excellent and useful invention of the Pendulum Artificial Horizon. I have made a number of observations on shore, which I enclose, and nothing can be more satisfactory than they are.

There are times when it would be of the very first importance to the navigator, namely, on clear moonlight nights when no horizon can be distin-

guished. Indeed from what I can judge by shore observations, I should always prefer it, during the night, when the vessel has not much motion, to the natural horizon. In misty or foggy weather, when no horizon is visible, and the sun appears provokingly clear; and during the "Smokes" on the south-west coast of Africa, when the sun shines brightly overhead, but no horizon can be discerned, (and this continues for several weeks at a time), no observations can be obtained either for the latitude or longitude; and as the current runs at the rate of one mile, or a mile and a half per hour, it is impossible for any vessel to know her position. Such an instrument as yours would then be invaluable.

I am, &c.,

H. J. Matson.

Observations of Sun's mer. alt. taken on shore for the purpose of ascertaining the correction of the instrument.

	April 6th.	8th.	10th.	15th.
	° ′ ″	° ′ ″	° ′ ″	° ′ ″
Obs.	45 11 20	45 56 40	46 40 40	48 30 0
Ref. & par.	52	51	50	50
	45 10 28	45 55 49	46 39 50	48 29 10
Sem.	15 58	15 58	15 58	15 57
T. A.	45 26 26	46 11 47	46 55 48	48 45 7
Z. D.	44 33 34	43 48 13	43 4 12	41 14 53
Dec.	6 36 11	7 21 6	8 5 36	9 54 24
Appr. lat.	51 9 45	51 9 19	51 9 48	51 9 17

	April 17th,		April 2nd. Mer. alt. Regulus.
	° ′ ″	° ′ ″	° ′ ″
Obs.	49 12 0	51 9 45	51 35 0
Ref. & par.	50	19	Cor. 20 26
	49 11 10	48	
Sem.	15 56	17	51 14 34
		43	Ref. 46
T. A.	49 27 6	172	T. A. 51 13 48
Z. D.	40 32 54	App. lat. 51 9 34	Z. D. 38 46 12
Dec.	10 36 49	True do. 51 30 0	Decl. 12 43 22
	51 9 43	Cor. 0 20 26	Latitude 51 29 34

Several others agree within 20″ or 30″.

In the foregoing it will be seen, that Captain Matson, having found the correction of his horizon by the sun, applies it to his observation of the star Regulus, and obtains the latitude, differing but half a minute from the truth; these being also his first series of observations, before he had attained that experience with the instrument so essential to good observations.

We have been favoured by Mr. Jeans, the Mathematical Master at the Royal Naval College at Portsmouth, with the following observations of several officers under his tuition.

Royal Naval College, Dec. 22nd, 1842.

I feel great pleasure in sending you the inclosed list of observations for finding the latitude, made by some of the young officers at this establish-

ment, with your Artificial Horizon. You will see that nearly every result is within a minute or two of the truth.

I am, &c.,

H. W. JEANS.

MERIDIAN ALTITUDES.

	Obs. alt.	Sun's L.L.	Cor.	Lat.	Observer.
	° ′ ″			° ′ ″	
27 Aug. . . .	48 51 0	+	15 33	50 46 46	Mr. Crauford.
18 Aug. . . .	51 50 50	+	16	50 48 27	" Burrows.

ALTITUDES NEAR MERIDIAN.

26 Aug.	11 36 A.M.	48 19 9	+	15 33	50 49 40	Mr. Crauford.
27 "	11 35	48 26 44	+	15 33	59 49 28	" Crauford.
27 "	11 25	48 8 51	+	15 33	50 48 40	" Crauford.
13 Sept.	11 12	41 46 43	+	14 6	50 44 22	" Barnard.
17 Aug.	11 57	52 11 40	+	14	50 47 30	" Key.
17 Aug.	0 4 P.M.	52 11 46	+	14	50 48 46	" Key.
17 Aug.	0 1	52 11 53	+	16	50 46 33	" Burrows.

The lat. of this place is 50° 48′ N.

MR. E. M. Chaffers, Master of H.M.S. Warspite, gives the following opinion of it:—

H.M.S. Warspite, Spithead, Oct. 23rd, 1843.

"I have been observing with your fog Horizon at the College, and have great hopes of its success; to-day I observed the latitude to ½′ only from the truth."

And Mr. Davy, late Master of H.M.S. Thunderer, whose account of the voyage of that ship to the Mauritius is both useful and interesting, and which in its sequel contains further observations with this instrument, concludes a recent communication to the inventor with this passage:—

"I was referred to last week by a gentleman about your horizon. I gave my opinion, and my usual answer, that I would not be without one. It will take a long time, but eventually will get into use, and be appreciated."

The foregoing opinions and observations sufficiently establish the character of this instrument, and prove the accuracy of the words of Sir Thomas Hastings that "those who take pains, and who have patience and perseverance to go through the necessary practice to become masters of it" may make a very good use of it. A. B. B.

FRAGMENTS FROM THE DARDANELLES.

(Continued from p. 222.)

COAST of Troy.—Tuesday, 4th of October, 1836.—The second volume of Purdy's "New Sailing Directory for the Gulf of Venice and the Levantine Division of the Mediterranean," (p.p. 157—167,) contains a mass of useful information for vessels passing between the islands of Mitylene and Tenedos, and through the Dardanelles, and as its pages testify (although not oftener than they should do,) amply extracted from the *Nautical Magazine*.

This work indicates sufficiently almost every danger, and is here an indispensable *vade-mecum*. I know not which is the most approved chart of the Straits, but I may mention that I have never found the

small one of the Admiralty, dated 17th of June, 1833, and published at the reasonable price of half-a-crown, incorrect to any extent, if incorrect at all. This chart—which I have not had occasion or opportunity to test in *all* parts of the Dardanelles,—was originally drawn up from French and Spanish Plans, and now contains the amendments made in 1830-31-32, by Captains E. Lyons and the Hon. F. Grey, of the Royal Navy, and by Capt. R. D. Middleton. Yet, in these seas it is ever to be borne in mind, that the very best charts and the most lucid sailing directions cannot altogether do away with the necessity for a doubly vigilant look-out, and, still more, a frequent and careful use of the *lead* when near the shore. These two precautions are, in truth, duties which, strictly speaking, should be adhered to in all parts of the globe, but certainly in no part more rigidly than in the "shaky" dominions of King Otho and the Padischah, the Sultan of the Osmanlees.

It must not be forgotten that the Grecian Archipelago and the Turkish main and littoral have, "many a time and oft," experienced most remarkable convulsions of nature; and, as among numerous other interesting instances, it is known that even two islands emerged from the "vasty deep" in 1707, close to that of Santorini, or Santa Thira, (itself of submarine and volcanic origin,) which is situate below Milo, and to the northward of Candia; and as severe earthquakes* still continue to occur throughout the Levantine regions, we may at once see that soundings, though correctly taken, and as correctly recorded in our charts, may yet from time to time, by these convulsions and by other causes, become somewhat altered, and that thus any expected number of fathoms may occasionally be found much less or more than set down therein or in the books. To the *lead*, therefore, and also to the *eye*, must prudent mariners trust as well as to charts and sailing directions. If they rely blindly on *any* chart, however good, and neglect watching for those various indications which every seaman ought to attend to—if they watch not, for example, for those *discolorations in the stream*, which in and near the Hellespont generally give sufficient warning of adjacent danger, they will probably find themselves, in nine trips out of ten, (though apparently not shaving the shore too close,) suddenly aground and hard and fast, where men and assistance are not easily obtained, or, if obtained, not always content with the sums asked and given and accepted. I can give a proof of this. In

* Constantinople, Tuesday, 23rd of January, 1838, 9 P.M.—We have just experienced two shocks of an earthquake. Sultan Mahmoud's third son, three years old, has died this evening; consequently a *firmahn* is issued, prohibiting any further balls or carnival rejoicings among the Franks for a certain number of days. * * * We subsequently found that this earthquake was exceedingly violent at Buchorest—"the city of enjoyment,"—the capital of Wallachia, where more than 300 houses were thrown to the ground, and nearly 100 people killed in a period of three days, during which the shocks were somewhat frequent. None were, however, felt after the 26th of January. Several mansions of the nobility, many houses, and the tower of the church of St. George, were toppled down. The tower crushed the roof of the church, and also a few shops erected near its walls, some of the tenants of which perished under the ruins. The whole of the south-west part of Hungary and Transylvania suffered considerably.—*Knight's Oriental Outlines*, p. 174.

March, 1834, the schooner *Corsair*, now in company, took the ground on one of the sandy patches which extend along the main opposite Tenedos, the Greeks of which Turkish island soon came to her assistance, lightened and hove her off, and received their dollars, and then it was discovered that, although they had been closely watched by the *Corsair's* crew, and that of the *Gossamer* yacht, they had concealed and carried away in their boats, cargo to the tune of six hundred pounds! This specimen of Romaic honesty occurred exactly two years and a half ago, not a mile from our anchorage of this morning, (Oct. 4). From that truly classic spot, where we had only remained the previous night, Tenedos appears close on the *left*, and more seaward Lemnos; on the *right* is the plain of Troy, backed, as every one knows, by magnificent mountains; *astern* the verdant and hilly coast (rich in woods and dotted with detached habitations and a few villages,) stretches southwards to Baba Buroon, near the ruins of Assos, visited by St. Paul. Two leagues *ahead* is the embouchure of the Dardanelles, whose stream, dividing Europe from Asia, is here two miles broad, and rapid enough to rush into the Ægæan at the rate of three or four miles an hour: to the northward and westward of the embouchure, rises the island of Imbros; to the southward of the embouchure, and about half way between its Trojan shore and Tenedos, (where the channel between the island and the main is about a league in width) are the Rabbit islands, five in number, not yet inhabited, and from their uninviting appearance not likely to obtain a human colony, while so much fertile land remains vacant in their vicinity. These were the "localities" we had in sight this morning, while the "mind's eye" was glancing back to the pages of Homer, and the brain and memory were not forgetful of Gell, and Dr. Clarke, and Leake, and Forchhammer, and a host of modern tourists, to whose clan next year (1837) French Steamers* will

* The first steamer ever seen in Turkey (according to Mc Farlane,) was the Swift, which arrived at Stamboul in May, 1828. This solitary boat, purchased by an Armenian and two or three other persons for 350,000 piastres, was by them presented to Sultan Mahmoud, since deceased, whose son and successor, Abd-ul-Medjid, the present Sultan, can now, in 1844, command from the windows of the Seraglio as good a show of smoking funnels as any monarch need desire to see, especially so very near his own palace.

The Austrians, who previous to 1837 had some two or three passage boats in Turkish waters, chiefly commanded by Englishmen,—Mr. John Ford, Mr. Everson, Mr. Wade, and other officers, established in that season their Levantine lines on a grander scale, and in May or June of the same year (1837) the French followed the example. So that from Marseilles and Trieste, and the Danube, there is now no lack of steamers running regularly to Constantinople, which capital receives also Russian boats from Odessa, and one of these is also commanded by an Englishman. Not to be out of fashion, the Peninsular and Oriental Steam Navigation Company, of London, now and then dispatch the Iberia, or some other of their fleet, to the "Golden Horn." To these craft may be added the Frank war steamers which occasionally visit the Bosphorus, as well as the Turkish and Egyptian vessels. The "Sons of the Prophet" have next to be astonished by the Archimedean screw and the other steam propellers, which would probably answer well in the Bosphorus, where, so deep is the water in many places close to the shore, that, through a little delay in tacking, the bowsprits or jib-booms of sailing vessels have frequently entered the windows of bank-side abodes, cleared a file or two of Effendees from their sofas, and in a few cases, I believe, brought down into the stream a whole front wall of lath and plaster, in the midst of the dust and smother of which mishap, the offending vessel has, without any injury to herself, got on the other tack, and sailed off as merrily

afford such facilities for seeing the "Lions of the Levant," that a trip from the Thames to the Troad (*viâ* Marseilles) will, whether it become a fashionable tour or not, be but an affair of a fortnight. Now, however, in 1836, no French *bateau-a-vapeur* is ready for the station, and all wanderers by sea must, therefore, for a time, be content with canvas; and, indeed, in a tolerable wind, sailing must or should be ever preferable to steaming: but let that pass. I have here only to log, that before day-light this morning we had symptoms of a coming breeze, and that, getting under weigh at 7 A.M., we beat past the several vessels clustered around us, got in due time to windward of the Rabbit Islands, and then standing on the starboard tack right across and almost to the very beach of Imbros, went about, and, at 1 P.M., passed, not half a mile to leeward of Cape Greco *(Helles Booroon)* and into the Dardanelles, between the New Castle of Europe and some twenty square-rigged vessels of all nations riding at anchor under its formidable line of guns. Had it been necessary for the Turks to give our little craft such a broadside as they did to Admiral Duckworth in 1807, we must have been smashed into "smithereens," for they could not have missed us had they tried. We were close in, and could hear the word of command given to some soldiery on the ramparts. A sketch of this and the other three principal fortifications of the Hellespont has been given by Tournefort; one of the fortresses forms the vignette in the title page of "Oriental Outlines," and a view of the Strait from Nagara Point, looking to the southward, is given in Capt. Frankland's "Travels in Turkey."

Care should always be taken not to hug the shore near and just above the New Castle of Europe. We kept away a little, as we ought, on the lead giving us but *fifteen feet*, and did not haul close to the wind again till clear of the little bay we immediately approached, in which, although there is anchorage, there is also much danger from rocks and shoals, many of the former being hereabouts above water. The breeze was dead against us, but we made considerable progress in our first two tacks, which led several of the wind-bound near Cape Greco to way and follow our example, and induced us steadily to persevere in beating. Off White Cliffs, or White Spots, on the Asian side, a great number of craft had brought up, and I question, unless we had let go the anchor in thirty-five or forty fathoms, whether we could ourselves have found a berth among them. So we declined such deep water and made another board or two, found the current very strong, and the breeze somewhat decreasing, and ultimately, at 5 P.M., dropped our killick in 17 fathoms, half-way betweeen White Cliffs and Barber Point; a village not quite two miles inland, bearing nearly S.E., and

as if nothing had happened. Steamers may, of course, avoid such accidents, but still, where there are so many small boats as there constantly are on the Bosphorus, paddle boxes and wheels—if there were no other reason for the change—might with advantage be at once superseded by screw-vessels. It is no joke, when squatted in the ticklish caik of a fatalist to get near a revolving paddle-wheel in a Bosphoric current, frequently running five or six knots, and requiring much more attention than that of the Dardanelles.

The French steamers in the Levant are never so well handled as the Austrian boats, and the officers of the latter service are much more attentive and courteous than the French. For a table of the rates of passage, distance, &c., *vide* "Oriental Outlines," p.p. 309—314.

the Inner Castles above us being in sight from the deck, as well as the whole entrance of the strait two leagues astern. Just as we were furling sails, the *Hind*, English man-of-war cutter, —which we had seen off Mitylene a few days ago—anchored below us; rather nearer to our anchorage was the French brig-of-war *Argus;* and ahead a Russian man-of-war schooner—which last vessel (as Capt. Candler of the *Tiber* informed us during the visit he paid immediately on our arrival) wayed from White Cliffs this morning, and attempted to beat up towards the Inner Castles, but after all her efforts she could not get much above our present berth, where she yet remains. Before tripping her anchor she shipped ten sweeps of a side, to try what she could do against the current, but this power was found of no avail, and she had to rely on sails alone. The English merchant-schooners, Cruizer and Clipper, were more fortunate early in the afternoon, and succeeded in getting past the Castles, after which it is easy enough to turn into the sea of Marmora, except occasionally near Gallipoli.

From the signals hoisted in reply to our number—shown both by Marryat's and by Walker's code—we found not only the *Tiber* here, but several friends on board the *Corsair, Monmouth, Brisk, Hellespont, James* and *Jane,* &c. Out of the 200 sail now detained by these contrary winds, many have been here more than a month! There is no place in the world less suited to an impatient man than the Dardanelles in a northerly wind; that is, if he be in a sailing vessel, and bound into the sea of Marmora, whence, hour after hour, vessels are continually passing his anchorage with studding-sails set, and in all the extacy of good luck.

In these straits almost every Englishman complains of the difficulty of making himself understood, whether marketing ashore, or having a pilot on board, for, with the exception of Mr. Lander, the British Consul, his kinsman, Mr. Calvert, and their gigantic dragoman, Kakoucho Russo, not a word of English seems to be known in the Dardanelles. We intend visiting the town of Tchanak Kalessi to-morrow, and happening to muster up a little Spanish and Italian among us, hope, should we not meet Kakoucho, still to pick up some other Hebrew conversant with one of these tongues as well as Turkish.

In this case we shall have but little difficulty to contend with in our ramble, and, moreover, in making our wants known through the "organ of speech," which is ever preferable to sign-making, shrugs of the shoulders, shakes of the head, and other interesting motions.

Wednesday, 5th of October.—From our present berth between White Cliffs and Barber Point we have an excellent view of that part of the strait which, according to general opinion, it requires a fair wind to pass. Five or six miles above us, the stream, passing between the *Old* Castles of Europe and Asia, narrows to three-fourths of a mile: six miles below us, where it is commanded by the *New* Castles of Europe and Asia, (built in 1658 by Mouhammad the Fourth, to check his enemies the Venetians in their flotillas,) it measures about two miles in width, and flows rapidly into the Grecian Archipelago. These four castles are built in pairs, two being in Europe and two in Asia. The New Castle of Europe faces the New Castle of Asia, and the Old, or "Inner Castles" (above us) also face each other. There are several smaller fortifications in the strait; none, however, exist on the Asiatic

side between Barber Point and the New Castle on the Trojan shore. The European side is better defended, having six or seven works in a space of ten or twelve miles. On the Asiatic side guns have occasionally been placed on Barber Point; but there are none there now, (in 1836). A few field pieces are ranged for practice on the hillocks immediately south of the river which runs under the walls of Tchanak Kalessi, the Old Castle of Asia, the left flank of which structure is now visible from the deck, but not its front. In face of it is the Old Castle of Europe, the full front of which we can clearly distinguish. A better idea of the latter may be formed from the engraving in "Oriental Outlines" than the sketch by Tournefort, who has at least omitted the two flaring red houses under its walls, which the former view contains.

The length of the Dardanelles from the Old to the New Castles is just four leagues, within which distance we have now 200 sail at anchor. The *pinch* is, with a northerly wind, to pass between the *Old* Castles of Europe and Asia. Once get past this spot—where a rifle will kill from one continent to the other—and there is but little difficulty in the rest of the trip as far up as Constantinople, where the Bosphorus then presents a similar trial of patience to all who may be bound into the Black Sea. In the twelve miles we have here always to contest with the Dardanelles current, there is no danger except near the shore. Mid-channel the depth is thirty-five, forty, and sometimes fifty fathoms, or more. The European shore is high, with luxuriant valleys; the Asiatic shore generally low, undulating as it falls back to the distant range of mountains of the Idæan chain, which bound it to the eastward, and presenting to the eye what may be called a vast and beautiful plain, though certainly anything but a level in its appearance. On the European side, throughout these four leagues, the shore runs comparatively in a straight direction, having some few picturesque bays and *baylets*, while on the Asiatic side the land so far recedes between Barber Point and the entrance of the Strait, as in one place to increase the width of the stream to nearly four miles; and, again, *above* Barber Point, the shore takes a considerable sweep or curve inwards. So that with a little attention the strength of the downward current may be here and there considerably avoided.

The village S.E. of our anchorage we conjecture to be *Aran-Keuy*, the temporary residence of the English Consul, who has just been burnt out of house and home at Tchanak Kalessi. I have often heard it regretted, that no one has yet published the names of every *Keuy*, or *Koo-ey*—the Turkish word for village—in this part of the Dardanelles, with, at least, their distances and bearings from Barber Point and White Cliffs, and the names of the "odds and ends" they could respectively furnish. Such information may not be absolutely necessary to the blue-jacket, yet it would often benefit him as well as the tourist, and satisfactorily fill many an inch or two of unoccupied "white" ("fat," I think the printers call it,) in our charts. To any one who may leave a ship at one point, to rejoin at another, the name of every place, and its relative bearing and distance from its neighbours, is of much consequence; at all events, in this part of Turkey, especially when it may be necessary to travel by night, and a man is tied for time, has a make-shift guide, none at all, or one not too much

to be trusted. This point has often come home to officers carrying despatches, and to others wrecked on the coast.

To the wind-bound—sometimes, it may be repeated, detained here for months—this knowledge would be very useful. In the first place, the villages are not numerous, and not very near the shore, so that captains, rather than walk their people a mile or two to some hamlet discovered from the ship, on the mere *chance* of getting what they want, now prefer going up to Tchanak Kalessi at once, however distant, where they can make *sure* of what they require. *But while absent these three or four hours they may, and often do, lose the opportunity of getting past the "Inner Castles,"* and are consequently detained for days or weeks longer than they might have been, could they have got on board again soon after the favourable breeze sprung up, or, at least, before it subsequently died away. Now, if we knew the *capabilities* of the country better than we yet do, might not most of our wants be sufficiently supplied, not only at Tchanak Kalessi, but at the villages more adjacent to the several anchorages? Among other advantages, it is known that in many of these smaller places, which are governed by Aghas, articles are just as good, and somewhat cheaper, than they are where a Bey or Pasha holds the rule. It is true, a vocabulary might be needed, and happily certain that before long every Levant guide book will contain one.

In reality, but little is known (except to our Consuls) of the Asiatic villages between Alexandria Troas and the Sea of Marmora. We can only say, that in books and maps likely to be correct, Enáe and Boonábassy are on the left bank of the Scamander, or Mendéré; Sheblac, or Tchiblac, on its right bank, and rather nearer to the Dardanelles; that three hours beyond Sheblac, travelling northwards, Hallil Elly is found, about half-way between which and Tchanak Kalessi—distant from each other some thirty miles—stands Ghiaour-Keuy, somewhere near White Cliffs, above which we are now at anchor. In this neighbourhood, also, are said to be situate the villages of Eet Guelmess and Coos Keuy. Whether Ghiaour-Keuy, and Aran-Keuy or Renny-Keuy, are one and the same, I know not; but, of course, most of the other places I have mentioned, being six or eight leagues off, cannot well be seen from the ship. But still several villages are prettily peeping out amidst the woods of the plains and acclivities on our right; their names we know not.

From Tchanak Kalessi, the route to Lamsaki, on the Asian side of the Strait, as pursued by Professor Carlisle and Dr. Hunt, passes Tchanak Kalessi, Karadjo, Narla, Karajouree, Moussah, Yapoodak, Gangerlee, Beergan, and then, after crossing two rivers, Lamsaki, (the ancient Lamsacus) is reached, above which are Sarthaki, Jouragee, and Camaris, or Kemeris; the last of which is outside the Dardanelles, on the shore of the sea of Mormora, has been surveyed by Mr. C. Tyers, R.N., and occasionally adds a man-of-war to the Ottoman fleet. Tournefort mentions Chardac, or Camanar, as opposite to Gallipoli, (within the Straits) the environs of which city and the ground southwards to Maitos, near the *Old* Castle of Europe, have been explored by a talented British officer, the author of "Turkey, Greece, and Malta," and of several other useful and amusing works.

(To be continued.)

The Coast of Africa from the Cape Colony to Ichaboe Island.

By Captain Morell.

September, 13th.—We continued exploring the coast keeping the boats close in-shore in search of fur-seal on every mile of the coast until Saturday, the 13th of September, when we fell in with a small island, in lat. 31° 32′ S., long. 17° 56′ E., about half a mile from the shore. Here, for the first time, our search was successful. A small reef runs off from the west end of this island, to the distance of about a hundred fathoms.

From this island we followed the shore to the north-westward, passing Point Grazing, in lat. 31° 20′ S., and four places which are said to be rivers, viz., Zwarte Darn River, in lat. 30° 45′, not open; Greene River in lat. 30° 33′, not open; Zwarte Lintjie River, 30° 21′, not open; and Koussie River, in lat. 29° 54′ S., long. 16° 57′ E.; the latter was open, and may be passed in boats only at full sea. It is closed at times, however, in the dry season, by the shifting of the sand-hills in windy weather. This may well be called Salt River, as the salt water runs up it about fifteen miles, ten miles of which is very shallow. This is the northern boundary of the Cape colony.

Many of the rivers which intersect this extensive colony are merely periodical torrents, which continue to flow during the rainy season, but which, during the summer, leave their deep-sunk beds almost completely dry; and the rivulets which are supplied by the mountain springs have scarcely escaped from their lofty sources, before they are either absorbed by the thirsty earth, or evaporated by the heated air. Even the permanent rivers, some of which contain sufficient water for the navigation of small craft, for several miles up the country, are all, except the Knysna, rendered inaccessible by a bar of sand or a reef of rocks across the mouth.

The land bordering on the sea coast in this latitude is very sandy, and only fit for grazing fields; and for many miles into the interior it seems to be destitute of arable soil. Many kinds of skins, however, may be procured here, including those of the leopard, fox, bullock, &c., together with ostrich-feathers, and valuable minerals from the head of Koussie River. Vast numbers of horned cattle are raised in the interior.

From the mouth of this river the coast trends N.N.W., a little westerly, twenty-eight leagues, to Cape Voltas in latitude 28° 24′ S., longitude 16° 28′ E.; variation per azimuth 25° 55′ westerly. There is a bank of soundings that puts off to the west of this cape, about thirty miles, at which distance there is forty fathoms of water; the depth becoming gradually and regularly reduced as we approach the shore. This bank extends southerly along the coast, quite to the Cape of Good Hope, varying from thirty to fifty miles off-shore; and from Point St. Martin's to the last-named cape there are many dangers, lying from two to five miles off-shore. But north of St. Martin's to Cape Voltas, there are no dangers more than a quarter of a mile from the land.

The Socos Islands, laid down on the charts as lying in lat 29° 35′ S., long. 16° 34′ E., said to be about twenty miles from the land,

are not to be found. They have been represented as four in number, with several small islands between them and the continent. But I can assert positively that no such islands exist; neither is there any island of any description lying between St Helena Bay and Cape Voltas, more than half a mile from the main.

Cape Voltas is also very erroneously laid down, in lat. 29° 20′ S., and long. 16° 31′ E., with a deep bay running in on the north side of the cape, twenty-five miles, in an E.S.E. direction, with deep water all over the bay. Now, the true and correct situation of Cape Voltas is in lat. 28° 27′ 30″ S., long. 16° 17′ E. The cape is a high bluff point, projecting into the sea, and there are several rocks lying about half a mile to the west of it, beyond which there are no dangers. About one mile north of the cape there is a small bay, not more than two miles in length, and one and a half in width; within which the anchorage is not safe, as the ground is foul, and heavy rollers are continually heaving in from the westward, at all seasons of the year. Ships, however, which are in want of firewood, may lie off and on, and obtain any quantity from the head of the bay, where they will find a thousand cords piled up on the beach, which come down the Orange or Gariep River, the entrance to which is about two leagues to the north of Cape Voltas.

The land around the cape, and to the south as far as Koussie river is high on the seaboard, running back into elevated mountains. The hill-sides are covered with very good grass for grazing cattle, but the summits of these eminences are one mass of volcanic productions. I know not how far north of Table Bay Mr. Barrow travelled, without discovering "a volcanic product"; but I am positive that such relics might have been found in great abundance as far south as Elephant river. Mr. Barrow says, "There is neither a volcano nor a volcanic product in *the southern extremity of Africa*, at least in any of those parts where I have been; nor any substances that seem to have undergone the action of fire, except masses of iron-stone, found generally among the boggy earth, in the neighbourhood of some of the hot springs, and which appear like the scoriæ of furnaces. Pieces of pumice-stone," he continues, "have been picked up on the shore of Robben Island (or Seal Island, in the mouth of Table Bay), and on the coast near Algoa Bay, which must have been wafted thither by the waves, as the whole basis of this island is a hard and compact blue schistus, with veins of quartz running through it; and, of the eastern coast, iron-stone and granite.

If these remarks were intended to apply to the vicinity of Cape Town, or even as far north as St. Helen Bay, a distance of more than a hundred miles from Table Bay, I have nothing to offer in opposition. But north of that, I must contend for volcanic remains.

It is said that there is no fresh water to be had on this coast, north of Cape Voltas. But this is an error; as any quantity can be had in Voltas Bay, in the rainy season, without the trouble of searching for it under ground. But by digging, fresh water may be had at all seasons of the year, at a short distance at the head of the bay, where the landing is very safe and convenient, sheltered by two small islands lying close to the beach, inside of which the water is perfectly smooth.

This is also a fine place to procure bullock's hides, fox-skins, leopard-skins, ostrich feathers, and many other valuable articles.

For the lucrative business of "jerking beef," there is not a more eligible situation on the whole surface of the globe; as any number of bullocks, in the finest order, may be purchased at fifty cents each, delivered on the beach; and for ten months in the year there is little or no rain. By penetrating the interior forty or fifty miles from the coast, which may be done with perfect safety, and without the slightest personal risk, thousands of fine fat cattle may be purchased for as many toys, and the bargain consummated under the guns of your vessel. The natives are honest and inoffensive; being in a state of nature, and having never studied the arts of deceitful villany which are practised so successfully by the children of civilization.

Should any citizen feel disposed to fit out a vessel for the coast of Africa, to procure a cargo of hides and other valuable articles, I will cheerfully communicate every necessary information on the subject; a subject which I have deeply investigated, and can speak of from practical knowledge. Such a voyage could not fail of being highly profitable to the owners and every one concerned. Had I not subsequently made more valuable discoveries in the Pacific, and were I not bound by every tie of humanity, as well as justice and honour, to restore my two captives to their native country, to which they are very anxious to return, I would myself be the first to penetrate the interior of Africa; with full confidence that in twelve months after I arrived on the coast, I could purchase, and have driven to the sea coast, more than fifty thousand bullocks, besides the other valuable articles common to that section of the country.

September 18th.—After taking on board a sufficient quantity of wood in four hours, we left Cape Voltas, on Thursday, the 18th, and steered to the north, with a fine breeze from the south, and fair weather. At 3 P.M., we reached the entrance of Gariep or Orange River, between which and Voltas Bay, on the sea coast, the land is very low, sandy, barren, and desolate. It retains this appearance for some distance from the shore; but after running back six or eight miles, it begins to swell into hills, and still farther back it rises into lofty mountains, which stand each side of the river, on the banks of which are a few Hottentot villages. The wealth of the inhabitants consists of herds of cattle and flocks of sheep.

Orange River, though quite extensive in its course, is in the latter part of the dry season, nearly closed at its entrance, and the water continues shallow four or five miles westward of the river's mouth. On this shoal the sea breaks every full and change of the moon, as there is a heavy swell setting in from the west at that time. There are many valuable minerals and precious stones found in and about this river, and I have found a few grains of gold-dust at the river's mouth. Copper and lead ore have been found here, and I have no doubt that there are many valuable mines in this part of the country. Notwithstanding the sterile aspect of the seaboard, twenty-five miles up the river the soil is good, and the country well wooded. A few miles farther east are extensive plains, on which I have seen more than 3000 head of cattle, equal to any in the world. Here the soil is rich, and

would produce any thing that might be put into the ground. Some of the forests are of very handsome growth, and the different varieties of plants are very numerous. I have bought bullocks here for one pound of powder each, and ostrich feathers at a proportionably low price.

Persons wishing to have communication with this river must land at Voltas Bay, and walk to the banks of Orange, as there is no landing at or near its mouth, any season of the year, on account of the continual heavy surf that is always rolling in upon this coast from the westward. This river rises far in the interior, and may be said to commence at Campbell's Dorp, six hundred miles directly east from its mouth; being formed there by the confluence of another, called Yellow River, which rises among mountains nearly four hundred miles to the north-east of Campbell's Dorp, and eight hundred from the mouth of the Orange. Two or three other rivers also add their waters to the Orange.

Taking our leave of Orange River, we continued examining the coast to the N.N.W. along a straight shore, clear of dangers, until we came to what is called Angras Juntas Bay, said to have an island at its entrance, and a bay or lagoon within the island, running six leagues north and south, completely sheltered from all winds. This I know is not the case, as I have examined every rod of this coast with my boats, in broad daylight, close to the outer edge of the surf on the beach. At the place called Angras Juntas there is a small bend in the land, running in to the eastward about a mile, the width of its mouth being a mile and a half. Here ships may find tolerable shelter, with southerly winds, and it is likewise a convenient place to have communication with the Hottentots, some of whom reside about five miles to the north-east of this bay. There is a small rock that stands to the south-west on the south point about two miles, with deep water all around it.

At the entrance of this bay there is fourteen fathoms of water, which gradually lessens to five fathoms, about half a mile from the bottom of the bay, sandy bottom. But the best anchorage is under the south shore, one-fourth of a mile from the point to the south-west, in six fathoms, sandy ground. This place is situated in latitude 27° 47′ S., long. 15° 50′ E.

September 20th.—We continued steering to the north and west, critically examining every mile of the coast, until Saturday the 20th, when we arrived at Whale Bay, which is in latitude 27° 23′ S. This bay is unsafe for ships to anchor in, on account of the shoal water in every part of it; but they may anchor outside of two small islands which front the bay, lying half a mile from the shore, on which may be taken a few fur-seal, in the proper season. The landing on the south side of the bay is good, and an eligible place for trading with the Hottentots, who inhabit a small village which stands in a pleasant valley, ten miles inland. They frequently stray down to this bay in search of shell-fish, and will dispose of bullocks, sheep, and ostrich feathers on very favourable terms. I can recommend these men for trusty guides for any person that may wish to take an excursion into the interior. The coast along here is nothing but one sandy desert, with the exception of a few rocky hills composed of volcanic substances.

From this place we followed the coast to Elizabeth Bay, which is fronted by Possession island. The centre of the island is in lat. 26° 57′ S., long. 15° 8′ E. Between this place and Cape Voltas there are many small islets and reefs, lying half a mile from the shore; but there are no dangers at double that distance from the land; and ships if becalmed, may anchor five miles from the coast, in from fifteen to twenty fathoms, sandy bottom. These soundings extend along the whole range of coast.

Possession Island is three miles in length, and near one mile in width; forming, on the east side, a concave curvature, in which ships will find good anchorage in from seven to four fathoms, sandy bottom, and smooth water. The landing is also good in front of the anchorage, near the centre of the island, half a mile from the beach. At this place, in the months of August, September, and October, any quantity of penguins' eggs may be collected; and fish of an excellent quality may be caught in great abundance about the shores.

On the surface of this island I saw the effects of a pestilence or plague, which had visited the amphibious inhabitants of the ocean with as much malignancy as the Asiatic cholera has the bipeds of the land. The whole island was literally covered with the carcasses of fur-seal, with their skins still on them. They appeared to have been dead about five years, and it was evident that they had all met their fate about the same period. I should judge, from the immense multitude of bones and carcasses, that not less than half a million had perished here at once, and that they had all fallen victims to some mysterious disease or plague.

There are a few sunken rocks lying off the south point of the island, about three-quarters of a mile, on which the sea generally breaks. There is also a reef running off the north-east end of the island, about three miles, on which the breakers are frequently very heavy. These reefs both incline to the eastward, which promotes the smoothness of the water in the harbour. Between the island and the continent, or rather between the extreme points of the reefs and the mainland, the channel is three miles wide, with from fifteen to ten fathoms of water, sandy bottom, and free from dangers. Ships intending to anchor at this island while the south winds are fresh should approach the anchorage from the south, and leave it by the opposite passage.

A Hottentot village, of limited dimensions and population, is situated about twenty-five miles E.b.S. from the bottom of Elizabeth Bay; and another, somewhat larger, will be found on an E.b.N. course, fifteen miles farther inland, containing about seven hundred inhabitants. Between this village and the sea coast is a dreary sandy waste, destitute of water, soil, and vegetation; with the exception of a small valley, in which there are several fine springs, where cattle that are driven from the interior may renew their stock of fresh water. Forty miles on an E.b.S. course from the landing, on the south part of the bay, are several small villages, inhabited by a very civil inoffensive race of Hottentots, who raise a considerable number of cattle and sheep. But seventy-five miles farther inland the cattle and sheep are almost innumerable, and may be purchased at a very low rate; say twenty-five cents per bullock, and five cents for sheep; besides the skins of other animals,

ostrich feathers, and ivory. At that distance the land is very fertile, and would produce any thing put into the soil.

But the farther you advance into the interior, beyond one hundred and twenty miles, the larger and more numerous are the herds of cattle, which may be purchased for a still lower price, to be delivered and paid for on the sea coast. There is no more danger in travelling into the interior of this part of Africa than there is in travelling from New York to Boston; providing the travelling party take no arms with them, and no more wearing-apparel than is absolutely necessary. On all my excursions into the interior of this country I was careful to go unarmed, and dressed in nothing but a pair of duck trousers and a duck frock. Thus presenting nothing to excite their cupidity, I was invariably treated by the natives with the greatest kindness and hospitality, as they would freely share with me their last morsel of food. I should not hesitate, therefore, to travel across the continent of Africa, if suitable encouragement were offered, as I am confident that the enterprise would be attended with no personal hazard so far as the natives are concerned.

September 24th.—Seventeen miles to the northward of Possession island is Angra Pequena Bay, where we arrived on Wednesday the 24th The westernmost point on the south side of this bay is in lat. 26° 39′ S., long. 15° 7′ 30′ E. This is a high bluff point, rendered conspicuous by a marble cross erected on the summit in 1486, by Bartholomew Diaz, a Portuguese navigator. This monument of his successful enterprize along the coast of Africa is still standing, after having braved the storms and heats of three centuries and a half. About four miles eastward of this cross is Angra Point, which has a small rocky reef, lying N.b.E., half a mile from the shore, between which and the point there are five fathoms of water. But I should always advise strangers to pass to the north of this reef, giving it a berth of half a mile. After passing the reef you will open a lagoon running in to the southward, between four and five miles, the entrance to which is one mile and a half wide; a clear passage, with seven fathoms in the middle of it, becoming gradually more shallow as you approach the head of the lagoon or either shore. After advancing about three miles up this lagoon, you will find four fathoms of water, muddy bottom, and here is the best anchorage under the western shore, about a quarter of a mile from the beach.

Two miles E.b.N. from Angra Point, and due east of the reef just mentioned, are two small islands, about one mile from the mainland, lying parallel with the coast, which runs here nearly north and south. Neither of these islands exceeds a mile in length; but the southern one shelters good anchorage in five fathoms of water, clay bottom. The best situation to anchor in on the east side of the south island is near its centre, about two cables' lengths from its shore; leaving a single rock, that lies level with the surface of the water, and nearly mid-channel, about half a mile to the north of this passage. This harbour may be entered and left with perfect safety, either from the north or south end of the island; but I can recommend the southern passage as being the most easy, and entirely clear from dangers twenty fathoms from either shore. The anchorage under the northern island is unsafe,

there being several sunken rocks between it and the mainland, which do not always show themselves.

These two islands have once been the resort of immense numbers of fur-seal, which were doubtless destroyed by the same plague which made such devastation among them on Possession Island, as their remains exhibited the same appearance in both cases. Shags and penguins had now taken entire possession of these two islands, in such numbers that ships might procure any quantity of their eggs in the months of September, October, and November; and have them entirely fresh, by clearing out the old from the nests, and gathering the new every morning. These islands present the appearance of volcanic productions of an ancient date, as do also some of the mountains in the interior of the mainland.

Navigators who visit this coast for the purpose of opening a trade with the natives of the interior should make Angra Pequena their principal rendezvous to the south. By travelling forty miles due east from the sea, they will come to fresh water, and will meet with Hottentots who are very friendly, and may be trusted. This excursion, however, thus far, is not pleasant, being over a barren sandy desert; but every mile you proceed farther the prospect brightens, the soil becomes rich and fertile, and the country abounds with all the productions of the climate. The inhabitants soon become numerous, and the grassy plains are covered with immense herds of fine cattle. The forests remote from the villages are the hunting grounds of the natives, where they kill or take various kinds of wild beasts for their valuable skins; such as leopards, lions, zebras, gray foxes, &c., together with birds of a beautiful plumage. Here are antelopes, sheep, and ostriches in abundance; elephants, jackals, ant-bears, porcupines, hedgehogs, baboons, apes, monkeys, &c. The country to the north-east of Angra Pequena abounds with ores and minerals, which, together with ivory, ostrich feathers, and other valuable articles, can be had low. The bay of Angra Pequena affords an immense quantity of excellent fish, of many different kinds, which may be caught either with a hook and line or a seine.

Navigators have reported, and it is so marked on maps and charts, that this region of the western coast of Africa is entirely destitute of fresh water; and that none is to be found between the sixteenth and thirty-first degrees of south latitude. This idea is founded in error; for I have found many places, while travelling along near the seashore on this coast, where fresh water may be had in any quantity by digging very shallow wells. To the north of Angra Pequena, about ten miles, there are many fine springs of excellent fresh water, about one mile from the sea coast, where any quantity of the pure limpid element can be obtained for a dozen ships at a time. The naiads of these fountains are female Hottentots, who, like the damsels of Padan-aram, are drawing water for their flocks. They, as well as the other sex, are very friendly, and will furnish a stranger with refreshments, and the most trusty guides, if he wishes to penetrate the interior. I have experienced their fidelity in many extensive excursions; and therefore speak from practical knowledge. Ten or twelve families are generally near each of those springs.

I can also refute another erroneous statement respecting this coast. It is said there is a dangerous shoal lying between three and four leagues to the west of Angra Pequena, in lat. 26° 35′ S. But I can assert, with the greatest degree of confidence, that there is but one shoal on any part of this coast, south of Spencer's Bay, that lies more than four miles from the mainland; and this one lies N.N.W. from Angra Pequena, or Santa Cruz, about fifteen miles.

October 2nd.—On Thursday we got under way, and steered to the south, to examine a few rocks which lie about one mile off-shore from the mainland, and nearly half-way between Possession island and Angra Pequena, or Santa Cruz, These rocks are small, but evidently of volcanic origin, and have fine anchorage between them and the mainland, in five fathoms of water, sandy bottom, sheltered from all winds. But their greatest attraction in our estimation was their dense population of fur-seal, with which they were literally covered. We of course secured a few of these animals, or rather a few of their valuable jackets. In going into the anchorage just mentioned, you pass the north point of the ledge, leaving the rocks on your right hand, half a cable's length distant, and then haul immediately round to the south, and anchor abreast of the middle of the ledge, about mid-channel.

October 6th.—From this anchorage we steered once more to the north, and passing Angra Pequena we arrived at Ichaboe Island on Monday, the 6th of October. This island, which is about one mile in circumference, lies eight leagues to the north and west of Angra Pequena, and not more than a mile and a half from the shore. On the east side of this island ships may anchor in perfect safety, in five fathoms of water, sand and clay bottom, about two cables' length from the shore. The safety and convenience of this anchorage are owing to the following circumstances:—A point of land from the continent extends three or four miles into the sea, to the south of the island; and from the extremity of this point a reef puts off in a north-west direction, until it nearly meets a reef that projects from the west side of the island. Another reef puts off from the north-east point of the island; consequently a bay is formed, in which a ship might lie all the year round, in perfect safety and smooth water. But in coming to this anchorage care should always be taken to pass round the north* end of the island, giving its north-east point a berth of half a mile, which will avoid all dangers. In working into this harbour the shore on the main may be approached within two cables' length.

This is a fine place for making captive the great leviathan of the ocean, the right whale, great numbers of which strike on this part of the coast about the middle of June. They are in the habit of playing about the reefs of the island, and that which runs from the continental point before mentioned; and as the south wind generally prevails, there is no difficulty in getting the dead whale alongside the ship. Scale-fish may be caught at the anchorage with hook and line; or at the bottom of the bay with a seine, in great quantities. An abundance of crawfish may also be caught with a hoop-net, all around the island, within fifty fathoms of the shore.

Eggs also may be obtained here in great quantities. In the months

* South.—Ed.

of October and November this island is literally covered with jackass-penguins and gannets, which convene here for the purposes of laying and incubation. The nests of the gannets are formed like those of the albatross, but are not so much elevated; while the jackass-penguins lay their eggs in holes in the ground, from twelve to thirty inches in depths, which they guard with the strictest vigilence. I have seen them stand at the entrance of these holes and protect their eggs or young ones with the most resolute perseverance, until they were removed by superior physical strength. They frequently lay three or four eggs, but the gannet seldom lays more than two.

This island is formed of volcanic materials, and its shores are resorted to by multitudes of fur-seal; we took about one thousand of their skins in a few days. The surface of this island is covered with birds' manure to the depth of twenty-five feet. The south-east part of the bay, on the mainland, directly opposite the island, is the finest place on this part of the coast for jerking beef, it being only four miles from a Hottentot village, and the springs of fresh water before mentioned, which will supply any number of cattle. Here also I travelled into the interior to a considerable distance, and found that the farther I advanced to the north-east the more numerous were the herds of cattle and flocks of sheep: while the skins of leopards, gray foxes, &c., could be obtained with the utmost facility; together with ivory, ostrich feathers, and other valuable products of the country.

October 20th.—Having taken as many fur-seal skins as was practicable, we weighed anchor on Monday, the 20th, and steered to the north, carefully examining the coast for fur-seal. I had now fully made up my mind that a series of voyages to this coast for jerking beef, and trading for other articles with the natives, would prove a most brilliant enterprise, and make fortunes for all concerned. So fully was I impressed with this idea, that I determined to propose it to my employers immediately on my return, not doubting for a moment that they would view it in the same favorable light. In the last particular I found myself mistaken, as I have already mentioned. But it really appears astonishing to me that some men of capital do not see the golden opportunity at a single glance, and seize on it with avidity. An investment of thirty thousand dollars only, if properly managed, would in two years produce a profit of from ten to fifteen hundred dollars per cent!

(To be continued.)

EXPERIMENT WITH COLT'S SUBMARINE BATTERY.—A trial of Colt's submarine battery was made on the Potamac, below Washington, on the 15th ult. The ship destined for the experiment was put steadily on her course up the channel, towards the Navy Yard, and, when the officers had left her, and the signal was given, a powerful battery exploded a quarter of a mile a-head of her. In another moment two more exploded on her larboard side. In the next instant the Styx was sent bow foremost up into the air. When the vapour had cleared away the bow and waist of the ship were invisible. They were riven into fragments. The stern, together with a part of the mizen-mast, were visible, but sunk down as far as it could into the mud, the water being but eight feet.—*Hampshire Advertiser.*

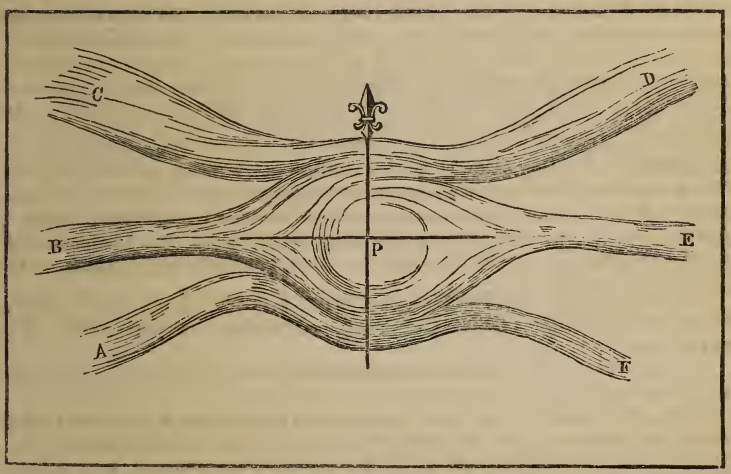
Review of the Phenomena of Thunderstorms, and their effects on Ships of the Royal Navy, *as printed from their official Journals in the Nautical Magazine.*—*By W. S. Harris, F.R.S.*

(Concluded from p. 291.)

On examining the official records of the effects of lightning in the Royal Navy, with a view to general scientific deduction, many highly interesting and important facts present themselves; these, in concluding this series of papers, we now proceed to notice.

The history of the different cases of electrical storms shews, a general shifting and variable state of the wind, attended by alternate calms, and squalls and heavy rain, which is not unfrequently converted into hail by the changes which take place in the temperature. The phenomena of these storms are such as lead us to infer, that by the meeting of many currents of wind, a sort of intermediate compressed space is produced, in and about which the air assumes a variable and irregular motion, producing in many instances a complete vortex.

This condition of things may be roughly represented by the annexed diagram, in which A, B, C, D, &c., represent the conflicting currents, and P the circumscribed space which may be considered as the centre of the storm.



Now, it is upon the confines of this space, and more paticularly within it, that the most violent electrical effects are produced; vast masses of vapour here condense, and shoot forth terrific lightnings; water is formed in such quantity as not unfrequently to cause a complete deluge.* A shuffling, unsteady, and shifting state of the wind

* These conditions of thunderstorms pointed out by Mr. Harris, are confirmed

would be more or less experienced, according to the precise position of the ship in or about the centre of disturbance.

The space P about which the different winds meet, may be either stationary, or have progressive motion in the direction of the resultant of the greater forces. In this case the opposite currents may be supposed to disperse themselves upon the general vortex of the storm as it advances. Hence a ship just without the confines of such a storm, and having the wind in a certain direction, may as in the cases of the Clinker, Guerriere, Racehorse, and others, see distant lightning and dense clouds coming from an opposite quarter, may begin to experience an unsteady and shifting state of the winds, accompanied by heavy electrical discharges, and finally a strong wind in a totally different direction. The electrical and other meteorological changes having taken place the progress of the storm may now become arrested, and the conditions upon which it depended vanish. In this case the original direction of the wind may return with fair weather, or otherwise the new direction may be permanent, or may have shifted some few points, as actually observed in many of the instances recorded.

The cases of the Bellette, Mignonne, and Pelican may be taken as instances of ships more immediately involved within the centre of the storm, and the phenomena are evidently such as may be supposed to arise under the conditions just mentioned. It would not be difficult to explain in this way the great variety of meteorological changes in electrical storms, and which would, be very dependent on the precise position of the ship, the course she is steering, the direction and

in a very remarkable manner by the Mauritius hurricane of last year, and no doubt by all others, but which, from want of observation, we are unable to say. For the facts we are about to state we are indebted to Mr. Alex. Thom, assistant-surgeon of a regiment, stationed at the Mauritius and who returned from thence last summer. Having devoted much attention to the theory of hurricanes, Mr. Thom took great pains to collect the accounts from the logs of ships which encountered that storm, some of them having suffered severely; and one of which by keeping before the wind performed a complete passage round the focus of the hurricane. Mr. Thom's observations however, lead to these results, which confirm Mr. Harris's statements,—

First—That near the focus of the hurricane, incessant heavy rain continued for above a fortnight, shewing the vast condensation of water which takes place; and

Second—That only in the north-west quarter of the whole meteor was lightning observed.

Now, the north-west quarter of the meteor would be on the confines of the south-west monsoon, and the usual trade wind; so that it would appear that it is on the confines of these two great prevalent winds charged with different atmospheres, and possibly in a different electrical state, that "the most violent electrical effects are produced."

Mr. Thom has illustrated his account of this hurricane with several charts, shewing the positions of the different ships in it at different periods of its course, and which are highly illustrative, of the necessity we might almost say, imposed on commanders of ships to study it for themselves. They resemble flies in a spider's web, ignorant of the proper way to avoid it; and doomed to go through the ordeal of fire and water, because they will not learn how to do so.—Ed. N.M.

extent of the electrical disturbance, and the forces of the contending winds.

These storms appear to occur in limited portions of the atmosphere, and do not frequently extend to any great height. Thus in the case of the Desiree in October, 1802, the storm was seen by an observer on the adjacent hill quite beneath him with a clear sky overhead.

The rapid formation of water in almost all these cases cannot but be regarded as an extremely important meteorological fact. We should be led to infer not only from analogy, but experiment, especially in the late curious discovery of Hydro electricity, that the sudden condensation of steam into water was the immediate source of the intense electrical disturbances which take place in the atmosphere. That in fact electricity as in the case of heat, might by the change of vapour into water be as it were roused from a latent into a sensibly active state, and so produce discharges between the clouds and the earth according to the known laws of ordinary electrical action. Dr. Faraday's late experiments however, on the source of electricity in the Hydro electrical apparatus, do not altogether confirm this conclusion, and it must be admitted that the state of artificial investigation is by no means satisfactory upon the point.

But, however unsatisfactory the result of minor experiments, may appear, however strongly it may be contended, that by the mere evaporation and condensation of water, no legitimate electrical indication can be established, as a direct consequence of these processes, still the great natural experiment is indisputable. Here we find the most powerful electrical developement, which if not the consequence, is at least coincident with the change of steam into water, or with the production of water in some way in the atmosphere, and this is clearly shewn by the history of the cases so frequently quoted.

On examining the different periods at which these electrical storms have occurred, it appears, that there is no hour of the day or night, or any time of the year not subject to them, although it is not improbable but that in certain places they may happen more frequently at one portion of the twenty-four hours than at another, or at one part of the year rather than at another. I have endeavoured to arrive at some deductions relative to these points, by generalizing the distribution of the cases, according to the stations of the ships, and since the cases extend over a great many years during which H.M. Navy has been constantly exposed to lightning in all latitudes and climates, any error which can be supposed to arise by the chances of a precarious distribution of the ships, would be sufficiently eliminated.

Northern latitudes—including Northern Seas, English Channel, Coast of France, Mediterranean.

Tropical latitudes—including East and West Indies, Coast of Africa.

Southern latitudes—including Cape of Good Hope, South America.

Tables 1, 2, 3, contain the results of a general analysis of the period of electrical storms, on these different stations, recorded in the particular instances we have given:—

TABLE 1.

Months.	Northern Seas.	Mediterranean.	Tropics.	Southern Latitude.
January.	4	7	3	1
February.	10	6	4	—
March.	2	8	9	4
April.	1	2	2	1
May.	0	2	6	1
June.	4	1	6	1
July.	3	3	8	1
August.	4	4	4	—
September.	0	11	6	—
October.	1	10	8	—
November.	2	6	6	—
December.	5	5	4	—
Total.	36	65	66	9

TABLE 2.

Hours.	Northern Seas.	Mediterranean.	Tropics.	Southern Latitude.
12 A.M. to 12 P.M.	20	27	28	5
12 P.M. to 12 A.M.	16	45	36	4
6 A.M. to 6 P.M.	17	37	24	3
6 P.M. to 6 A.M.	19	33	38	7
12 A.M. to 6 P.M.	10	14	13	5
12 P.M. to 6 A.M.	9	21	26	4
6 A.M. to 12 A.M.	9	29	10	2
6 P.M. to 12 P.M.	12	14	17	3

The hours named are inclusive.

The following results from Table 1, may be taken to represent the prevalence of electrical storms in different seasons or periods of the year in the latitudes specified. The months of March, April, May, being considered in the more northern latitudes as months of spring; June, July, August, months of summer; September, October, November, autumnal months; and December, January, February, winter. In the more southern latitudes this order is reversed, whilst in tropical latitudes where the seasons are not so marked, these periods must be considered to a great extent arbitrary.

TABLE 3.

Periods of the year.	Northern Seas.	Mediterranean.	Tropics.	Southern Seas.
March, April, May,	3	12	17	6
June, July, August,	11	5	18	2
September, October, November,	3	26	20	—
December, January, Febuary,	19	18	11	1

The following are a few general deductions from this table:—

Northern Seas.—The cases in summer are less than those in winter in the ratio of 11 : 19 or 1 : 2 nearly; the cases in spring are less than those of winter in the ratio of 3 : 19 or 1 : 6 nearly; the cases in spring are less than those of summer in the ratio of 3 : 11 or 1 : 3 nearly. The greatest number of cases have happened in winter; the least in spring or autumn; whilst the cases in the summer hold a mean proportion between these seasons.

Taking the sum of the cases in spring and autumn, and those in summer and winter, the proportion is as 6 : 30 or 1 : 5.

Now, these ratios so far as this induction extends, may be taken to express the liability of damage to our shipping by lightning in the four quarters of the year. So that the chances of damage to onr fleets in these latitudes is twice as great in winter as in summer; four times as great in summer as in spring or autumn, and six times greater in the winter than in the spring or autumn.

The only general deductions from Table 2 relative to the particular period of the twenty-four hours at which electrical storms occur in these climates, are these—

1st. The cases which occur between mid-day and midnight, rather exceed those between midnight and mid-day.

2nd. That in the other periods compared, little difference is observable.

Mediterranean.—In the Mediterranean, perhaps one of the most important stations of the fleets of this country, electrical storms are very prevalent. The number of instances found on this station, amount to about sixty-five. Here the cases in summer are to those in winter as 5 : 18 or 1 : 4 nearly; the cases in summer to those in autumn as 5 : 26 or 1 : 5 nearly; the cases in spring are to those in winter as 12 : 18 or 2 : 3 nearly; the cases in spring to those in autumn as 12 : 26 or 1 : 2 nearly.

About one-thirteenth of the whole number have happened in summer; rather more than one-third in autumn; above one-fourth in winter, and rather less than one-sixth in spring. Of the twelve cases which occurred in spring two-thirds happened in March.

The liability of damage from lightning is evidently greatest in the

Mediterranean in the autumnal months, being five times greater as compared with the summer, and twice as great as compared with spring. Fewer cases have happened in the summer than in any other period of the year, whilst the spring holds a mean place between summer and winter.

The general deductions from Table 2, for given periods of the day and night are somewhat marked and decisive. We have to observe first, that full two-thirds of the whole number of cases have occurred between 12 P.M. and 12 A.M.

The cases between mid-day and midnight, are less than those between midnight and mid-day, in the proportion of 27 : 45 or 1 : 2 nearly. A similar result is evident in comparing the instances between sunset and midnight, with the number between sunrise and mid-day. The last exceed the first in the proportion of 14 : 29 or 1 : 2 nearly.

We may next observe that about one-third of the whole number of cases have occurred between midnight and sunrise, and that the chance of damage is greatest between sunrise and midday, and least between mid-day and sunset.

Tropical latitudes.—The cases in these latitudes amount to the same number as in the Mediterranean. The greatest number of cases have occurred in the months of September, October, and November, the least in December, January, and February, and the proportion is as 11 : 20 or nearly as 1 : 2. There does not appear to be a very marked distinction in the other periods; the cases in the hurricane months not differing materially from the number of cases in the preceding quarters, although after the cessation of the violent winds with which these climates are periodically affected, there appears to be a less frequent occurrence of electrical storms.

By Table 3, we perceive, that the cases between sunset and sunrise exceed those between sunrise and sunset in the proportion of 24 : 38 or 2 : 3 nearly.

Twice the number of cases happen between midnight and sunrise that occur between mid-day and sunset. In these latitudes upon the whole the chance of damage to shipping by lightning is greatest about the period of the hot months and when the sun is below the horizon.

Southern latitudes—The cases found in these latitudes are too few to warrant any very critical inquiry. It is not, however, unworthy of remark, that, of the nine cases recorded, nearly all have occurred in the autumnal quarter of these latitudes; out of five cases in the Rio de La Plata, four occurred in March, the remaining one early in April, and they have also happened for the most part after the sun has sank below the horizon; the proportion being as 3 : 7 or 1 : 2 nearly.

The next point claiming attention, is the proportion of ships struck on different masts, or the tendency of lightning to fall on any one mast rather than on another. On examining the recorded instances with this view, we find that vessels rigged with three masts, and those rigged with two masts have been struck by lightning as in the following table.

TABLE 4.

Masts.	Ships.	Brigs.
Fore mast	36	10
Main-mast	105	20
Mizen-mast	9	
Fore and Main	13	
Fore and Mizen	0	
Main and Mizen	4	
All the masts	3	
Bowsprits	2	
Total.	172	30

From this table it appears, that in ships the greatest number are struck by lightning on the main-mast, the least number on the mizen. The number on the fore-mast is less than on the main-mast in the proportion of 36 : 105 or as 1 : 3 nearly.

The number on the mizen is less than on the main in the proportion of 9 : 105 or as 1 : 12 nearly.

The number on the fore-mast exceeds those on the mizen-mast in the proportion of 9 : 36 or as 1 : 4.

The number on the main and mizen is less than on the fore and main in the proportion of 4 : 13 or 1 : 3 nearly.

No instance has occurred in which the fore and mizen have been struck exclusive of the main-mast.

Comparing the number struck on each mast, with the Total 172, it appears, that rather less than one in two are struck on the main-mast, rather less than one in five on the fore-mast, about one in nineteen on the mizen-mast, and not above one in 86 on the bowsprit.

With respect to brigs or vessels rigged with two masts, the number struck on the fore-mast is less than the number on the main-mast, in the proportion of 10 : 20, or 1 : 2 of the total number, one-third was struck on the fore-mast, and two-thirds on the main-mast.

No instance is found of a brig or frigate struck by lightning on the bowsprit.

We may infer from these results, that the electrical discharge tends to fall on the centre of the mass, and is only prevented from doing so by the accidental position of the vessel, by which the resistance is made less in other directions.

This history of the effects of lightning on ships contains three instances of lightning falling on one mast, notwithstanding that the old kind of chain-conductor had been applied to another:—viz., Endymion, at Calcutta, March, 1842; Ætna, Mediterranean, January, 1830; Racer, at sea, May, 1835. These cases, together with several others in which discharges of lightning have fallen close by ships into the

sea,* and even on board of them, without touching the masts at all, very clearly shew, that the metallic, or pointed bodies, have little or no influence, independently of the facility which by their position, they may afford to the progress of the discharge, and that consequently they cannot be said to have any specific attractive power, properly so called, for the matter of lightning. The cases of the Arab, Dispatch, Palma, Bellette, and many others, will be read with interest, as bearing on this point.

Indeed, the whole series of cases completely proves, that discharges of lightning are determined upon the surface of the sea, by certain laws of attraction and resistance, solely referable to the opposed electrified surfaces of the clouds and sea, and intermediate air; and that the question, of the liability of a ship to suffer from lightning, is a question depending entirely on the position of the vessel in respect of the electrical discharge, not on any specific attractive power of metallic bodies connected with the ship for the matter of lightning, whenever such bodies happen to be in a position to facilitate the progress of the discharge, the lightning falls on them, but not otherwise. Thus, in the three cases just quoted, such happened to be the position of the ship, that the resistance to discharge, through the intermediate air in the direction of the conductor on the main, was evidently less than the whole resistance in the direction of the foremast. The propriety of applying a lightning conductor to each mast, in order to insure perfect security, is from these instances, quite apparent.

Although we find that damage has thus ensued to parts of a ship *distant* from the conductor, yet we find *no instance* in which metallic bodies, such as chains and lightning conductors generally, have not completely protected the masts, &c., to which they have been *immediately applied.* Thus, chain top-sail tyes and sheets have invariably, saved the masts, as far as they went. We have numerous instances of this—viz., cases of the Athol, Hyacinth, Columbine, Wasp, Zebra, Racer, Racehorse, and others. The case of the Chichester, again, shews the protecting effect of metallic bodies as conductors of lightning even in passing through the solid and massive timbers of the vessel. Instead, therefore, of any danger arising out of an assumed force of attraction for the matter of lightning, peculiar to metallic bodies, it is demonstrable from experience that metals never fail to afford the most marked and complete protection *as far as they extend.*

On a further examination of the phenomena of the electrical discharge which these records present, it is observable, that the great mass of destruction ensues in and about bad conducting matter, and is the result of expansion. The cases of the Sultan at Mahon, Phæton, Rodney, Chichester, and Desiree, are very instructive instances of the tremendous force called into action. In the Bellerophon, the whole of the main-top-gallant-mast at once disappeared, together with thirteen feet of the fish on the fore-mast. In many cases spars, varying from thirty to sixty feet in length, and from ten to twenty inches in diameter, have been shook in pieces. In the case of the Sultan, the

* See cases of Dispatch, Spartiate, Opossum, Ætna, Romney.

main-top-mast, a spar of nearly twenty inches in diameter, and sixty-six feet in length, was so splintered, that it fell and covered the deck with chips; and the main-mast, three feet in diameter, and above 110 feet in length, and which with the iron about it weighed eighteen tons, was so shook that it was with difficulty supported. One or two holes were produced in it sufficiently large for a boy to creep into. The chips of these appeared in all directions; the very heart of the mast was knocked out; and when hauled on shore, and the wouldings removed, it fairly came in pieces. In the Rodney, also, the main-top-gallant-mast, fifty feet in length, varying from twelve to six inches in diameter, and weighing above eight cwt., was never seen from the instant the discharge fell on it. It seemed to vanish into chips; these were strewed over the surrounding sea. The flash of lightning which struck the Desiree in October, 1802, not only knocked the main-top-mast in pieces, but it threw two large fragments of it with such force, in different directions, that one of them fell on one side of the harbour of Port Antonio, and the other piece fell on the other side of the harbour. Now, this spar was upwards of sixteen inches in diameter, and fifty-seven feet in length. The cases of the Surinam, Clinker, and Russel, afford remarkable illustrations of this expansive force.

In the midst of these destructive mechanical effects of the electrical discharge, and which are always observable in its progress through bad conducting matter, it is not a little remarkable, that in passing through good conductors of a continuous kind, the heating effect is comparatively trifling. In the whole series of cases we do not find that a mass of metal of any magnitude has been completely fused, not even a small metallic pin or bolt. A comparison of the expansive with the heating effects of lightning, as given in the ships' journals, enables us to estimate with great advantage the quantity of metal requisite for the perfect transmission of lightning. The following instances are of great consequence to this sort of deduction:—

Hyacinth, Indian Ocean, September, 1833.—The electrical discharge passed through seventy-five feet of bad conducting matter, shook main-top-mast in pieces—a spar forty-four feet long, fourteen inches diameter, and weighing twelve cwt. It afterwards passed over about the same distance on metallic bodies, viz., an iron chain sheet, the links of which were made of half-inch rod, and the cylinder of a copper pump, leading through the side—this cylinder was three inches in diameter, and less than the tenth of an inch thick. Some expansive effect was observable in the direction of the pump; but the metals did not evince the least mark of fusion or other heating effects.

In the Rodney, Mediterranean, 1838, the charge which dispersed the top-gallant-mast, and did so much other damage, fell on a copper funnel and on top-gallant rigging; this funnel was sixteen inches long, ten inches diameter, and not quite a quarter of an inch thick, but it did not exhibit any mark of fusion.

We find in these recorded cases very numerous instances of the passage of lightning on metals, and on other bodies, which admit of a strict comparison of the heating with the disruptive or expansive effects of the discharge; and from these we find that little or no danger attends

the passage of lightning upon metallic bodies in consequence of the heat evolved. It is in bad conducting matter that heat is evolved; and here we find inflammation frequently produced. The damage which is found to occur in metallic bodies,—such as in the case of Blazer, where the chain-halliards were knocked to pieces about the decks—evidently arises from the expansive force produced between the discontinuous links of the chain.

Such are some of the principal deductions worthy of notice on a critical analysis of the cases of thunder-storms, found in the official log books of H.M. Navy; and although the series of papers containing them may to many appear somewhat tediously extensive, yet, on the other hand, it is to be remembered, that they have a very important bearing on many points of the greatest value to meteorological and general science, and affect, therefore, in some degree, the prospects and interests of the nautical world. I cannot, therefore, but hope, that in rescuing so many valuable facts from the oblivion of dusty and deserted manuscript journals, and placing them on record in the pages of so useful a work as the *Nautical Magazine*, I may not altogether be undeserving the approbation of persons engaged in the cultivation of general science who may probably find a reference to such facts of essential service to them. To collect, authenticate, classify, and reason inductively upon facts, was the course pursued and recommended by the greatest philosopher of his age, and it is really the only course likely to advance our knowledge of the many wonderful natural operations which are constantly occurring, and which bear so immediately on our physical existence.

The reader is requested to make the following correction in the last paper, detailing the amount of money sunk in consequence of damage by lightning.

Page 286, line 2 from the bottom, for 500*l.* read 250*l.*
287, line 14 from the top, . for 25,000*l.* read 12,500*l.*
— line 21, . . for 84,450*l.* read 71,950*l.*

Voyage of H.M.S. Thunderer to the Mauritius and back.

Notes by Mr. H. Davy, Master, R.N.—1843.

(Continued from p. 212.)

To have the true strength of the trade wind, and to get clear out from the land, we first steered west for twenty miles, and then south-west, for passing at a fair distance south of Bourbon. The distance between the islands is 110 miles, and the chart will give a S.W.b.W. course, but it is needful to guard against a north-west current. At day-light next morning we were in with the land, and had a good view of the island. Its scenery is very unlike that of the Mauritius; there were no rich plains, or rivers, or inlets; but, on the contrary, it appeared like a huge mountain, against which the seas of the Indian Ocean broke, as if no landing could be made on its shores. The slopes and valleys appeared well cultivated, and bore testimony to the ac-

counts that are given of its productiveness. The Volcano was in action, and the smoke and flame, rising high above the crater, was very distinct about sun-rise, but towards noon it was faint and scarcely noticeable. This mountain lies in the south-east quarter of Bourbon, and does not look much higher than the surrounding elevations; it must, however, be considerably more so than any part of the Mauritius, as it was seen at day-light the morning after we passed it, bearing north-east seventy-five miles.

The time for rounding the Cape was dead winter, when the north-west gales and the heavy Lagulhas seas are so justly to be dreaded: the heaviest of these are met with on the edge of the bank where the current runs strongest, whereas, by keeping in with the land, the water is known to be much smoother, but the current weak and uncertain. Which of these routes to determine on must ever be a consideration of much moment; in our case, with 1100 people on board, and not being in the best condition aloft, it was decided to adopt the latter, in pursuance of which, and to get into the Mozambique stream, a course was shaped for the coast of Natal. This land was reported at day-light of July 4th, and we stood on until the Water Fall and St. John's River were made out, being then 100 miles south-west of Port Natal, and thirty from the nearest shore. The weather was very fine and clear, so clear that the mountains of the interior, their tops being covered with snow, were seen over the coast hills; these latter are high, sloping gently towards the sea, with numerous ravines and deep gorges, but we could not discover any sign of habitation, although, from the general appearance of the country, it induced a sharp look out; the more so, as the chart notices several Kaffer Kraals; and also that between Natal and St. John's River, a distance of 130 miles, that there are 122 rivers.

An Extract from Dampier's Voyage, 1690.—"The country of Natal takes about 3½ degrees of latitude from north to south, and is open to the Indian Sea on the east, but how far back it runs to the westward is not yet known.

"That part of the country which respects the sea is plain Champion and woody, but within land it appears more uneven, by reason of many hills which rise in unequal heights above each other. Yet it is interlaced with pleasant valleys and large plains, and 'tis checkered with natural groves and savannahs. Neither is there any want of water, for every hill affords little brooks, which glide down several ways; some of which, after several turnings and windings, meet by degrees, and make up the river of Natal, which dischargeth itself into the East Indian Ocean, in the lat. of 30° south. There it opens pretty wide, and is deep enough for small vessels. But at the mouth of the river is a bar which has not above ten or eleven feet water on it in a spring tide; though within there is water enough. This river is the principal of the country of Natal, and has been lately frequented by our English ships, particularly by a small vessel that Captain Rogers, formerly mentioned, commanded.

"There are also other streams and rivers, which bend their courses northerly, especially one of a considerable bigness about 100 miles within land, and which runs due north.

"The woods are composed of divers sorts of trees; many of which are very good timber, and fit for any uses, they being tall and large. The savannahs also are clothed with kindly thick grass.

"The land animals of this country are lions, tigers, elephants, buffaloes, deer, hogs, conies, &c. Here are also abundance of sea-horses.

" Elephants are so plentiful here, that they feed together in great troops—1,000 or 1,500 in a company.

" The sea and rivers also abound in fish of divers sorts, and there are plenty of turtle and tortoises; the natives catch these by fastening a string to a live sucking fish, or remora, which, going down the stream, doth fasten himself to one, and then they are both drawn up together."

At noon the latitude was 31° 40′ S., long. 30° 8′ E., and the Water Fall, glistening as it leaped the rock bore N.b.E.; the wind had fallen, and we lay becalmed; thus fortunately were we situated for observing the effect of the stream. During the preceding twenty-four hours the ship had been set S. 53° W., 54 miles; the current previously having been to the northward since leaving the Mauritius, from fifteen to twenty miles a-day. Nothing, indeed, could be clearer or more satisfactory than our entrance within the influence of this extraordinary stream. It was certainly a rather novel situation to be placed in; here was an 84-gun ship, with all her freightage, drifting stem foremast on her direct course, at a rate of five knots an hour, with her head to stream, appeared to be the most natural position, and thus, as she was borne along, we could see up the deep gorge of St. John's River, and notice how rapidly the back lands were shutting in.

The temperatures were, air 66°, water 68, bar. 30·30, wind 0, weather B.V., and the variation was 29° west.

At four o'clock a breeze sprung up from the north-east, which, as we shaped a course with the trend of the land, was nearly aft, keeping the same distance off shore throughout the night, twenty-four miles, considering ourselves to be in the strength of the stream. By eleven o'clock the breeze had freshened to in all studding-sails and royals, down driver, and we must have been going over the ground at least sixteen miles an hour. The night was brilliantly clear, so that we could trace the outline of the land, and occasionally saw the watch fires of the Kaffers; these, as they were reported, " light on the starboard-bow" or " light on the starboard-beam," would look very near, so deceptive generally are lights when seen by night. At day-light, being abreast the Great Fish River, we hauled up for passing Cape Recife at a fair distance, which was across the stream, and, as a boat running out of a strong tide, so did we pass into the inshore eddy. The ship's position at noon was in lat. 34° 10′, long. 26° 34′.

Course and distance made good . .	S. 50° W.,	234 miles.
Ditto, " by log . .	S. 50° W.,	139 "
By thus following the course of the stream, we were set		95 "

and had we continued in it there cannot be a doubt but that the average of five knots would have been accomplished. Circumstances were singularly favourable for determining the velocity of the set, as the weather remained clear, and the observations were verified by bearings of the land. It would also appear, that the Mozambique stream continues its W.S.W. and W.b.S. course, (south-west nearly true,) and does not conform in any way to the outline of the Lagulhas Bank, until it strikes on its south-eastern edge on the meridian of Plettenberg

Bay, and to this point vessels intending the inshore passage may advantage themselves by following its course.

The temperature of the stream was 68°, air 66°, and I think, as near as opportunities permitted of ascertaining, that its breadth on the parallel of St. John's River was about eighty miles. At sun-set Cape Recife bore north true, five leagues; the wind was still fair, and the course was W.b.N., to pass Cape Lagulhas at the same distance. The weather remained B.V., and by ten o'clock we were rattling along ten knots; nothing apparently could be more favourable; only hold on good breeze, and we shall be round the Cape in no time. Such were the anticipations and, no doubt, ardent wishes of every one; but the glass said clearly enough, put no trust in these fair weather signs, and went down rapidly, in twenty-four hours from 30·30 to 29·75. During the night the wind headed and fell light, and at day-light next morning, July 6th, a north-wester was in sight: it was of no use doubting it; there were the heavy black clouds, anon a cat's paw was sent forth just sufficient to ruffle the smooth sea, and it was gone; then a laughing kind of puff would pass over the ship—a long swell—the fitful breeze—then the squall. Hands shorten sail, and the gale was on us; so quick do the north-west gales generally get up. To make the ship snug in time is a grand thing; the reefs are then taken in well, and you await the bursting of the storm, (which is mostly accompanied with heavy rain,) prepared for it, with top-gallant-masts on deck, and the ship under a close reefed main-top-sail, reefed fore-sail, and storm-sails. The gale lasted three days, and each day we stood in on the port-tack, and made the land, wearing ship, and standing off again during the night. There was a heavy sea running, and the squalls and gusts were hard and frequent with rain. Between the squalls the weather was very clear, and we were enabled to fix the positions at noon by observations. There was no current, and the few miles of easting shewn on the account was, no doubt, the effect of drift. As previously noticed of the wind veering round in the southern hemisphere, so on the breaking up of the gale did it now go round to south-west, south, and to east, freshening up to a good breeze, with which, on the 11th, we rounded the Cape, and had a satisfactory sight of Table Mountain. The ship had been made strong again, and ready for the next gale; new sails were bent, and the split ones repaired. However, having attained the meridian of 16°, we steered away N.N.W. for St. Helena, and every inch was getting more from their region; indeed, we had but the one gale, and esteemed ourselves most fortunate.

After getting the trade wind, a half point more northerly, or N.b.W. $\frac{1}{2}$ W., will make up for the westerly set, which is always experienced in that route.

Our friends, the Albatross and Cape Pigeon, those constant followers of ours for a thousand leagues,—their departure was watched by so many, that it may not be out of place to notice how far they did journey with us. It was farther north than was expected, as it is seldom that they are met with much within the tropic. Nearing the Mauritius, the albatross left us in 26°, but the Cape pigeon continued

on until the island was sighted; and, towards St. Helena, the albatross left in 27°, and the pigeon in 19°.

St. Helena, July 26th.—At five, P.M., the island was descried, it being then distant forty-two miles, the drift was to the north-west, and having ran to fifteen miles from the nearest shore, we hauled out under small sail on the starboard tack, keeping the land in sight all night. At day-light we were in a good weather position, and bearing away, rounded Buttermilk Point, at less than one-third of a mile, and at nine o'clock anchored abreast James Town in fifteen fathoms black mud, being then half-a-mile from the landing-place.

St. Helena is a famous place for water; launches, casks, and every facility is afforded. A flag is hoisted at the jetty head when the launch is filled, to send boats to tow her off: any quantity may be had from 80 to 100 tons a day, if necessary. Neither is there any want of supplies; but the price of all sorts of stock is high, except potatoes, which are excellent in quality and nearly the same per cwt. as at the Cape. Vegetables were plentiful and very fine, we had also a variety of fruits, but it was late in the season for a great show: good fat beef was to be had, and poultry in any quantity, indeed whoever visits this wonderful little island should make a point of going to the market. Of fish, the sea was alive with them, shoals of mackerel were about the ship, and sharks were numerous, they are large voracious monsters, and most marvellous stories are related of them, but none more so than in the Admiralty Book of Directions, p. 32, "Of the fact of an artilleryman entire, and with his clothes on, being found in the belly of a large shark." Fancy the villain asking for more. There is a *yarn* of the shark told at Bermuda, of an epicurean gent., being caught with a cask of pork in his bag, hoops and marks all perfect, and contents 80 four-pound pieces. Flying fish of a large size are sold at 1*s.* each, well cured, and will keep for years, they run from 18 to 24 inches in length, and are good specimens and fair eating.

James town, situated in the foreground of James valley, is a remarkably clean, neat looking place, and with the forts and mountain peaks, possesses an agreeable aspect, which is enhanced by the fleet of ships that are at anchor, or passing by, and for a small island ten miles only in length placed in the midst of a vast ocean, it has an air of life and commercial importance. Nor is disappointment felt on landing, on the contrary its wide street, fine buildings, good shops, the church, gardens, and clean neat appearance is presented on entering by the sea gate, and usually calls forth expressions of surprise at so pleasing a picture. The hills on each side of this valley must be nearly a thousand feet high, and their dark rocky sides are very steep; the ascent to the signal station on the right is by the famous ladder of 700 steps, which is well kept, and being painted white forms one of the most remarkable objects of the surrounding scenery; it is seldom used except by the native boys, or a few wild soldiers, or Jack, who is ever fond of tumbling up steps, may occasionally be seen amusing themselves. The road is a zig-zag, winding sufficiently easy for carriages; and, as likewise the one on the opposite steep leading to Longwood, must have been cut out of the rock at a cost of immense labour.

The town of the island.—A party of six left James town at nine o'clock on a cool cloudy morning, and got on the steep road on the hill side, called the side path, we could look down as we travelled slowly up, into the back-yards, and spy out many an imperfection. It was certainly not the most favorable position for viewing the town to advantage. The valley, however, with its gardens and villas, extending throughout its length, looked very attractive, and was a bright spot among barren hills.

The Briars is the first place to visit. It is situated about a quarter of a mile from the road, and was purchased for Napoleon's temporary residence, until Longwood was being prepared for his reception. The grounds are extensive, with gardens producing a variety of fragrant flowers, abundance of healthy vegetables, and trees which formed most agreeable shades. In the rear of the house, called the Pavilion, is the vineyard. A pretty quarter-deck sort of walk is there, and at one end used to be a chair, this was the favorite retreat. The view is pleasing surrounded as it is by mountains, and it was from those commanding eminences that the look-outs used to signalize the Emperor's movements. The pavilion is very small, but it is neat, with its front towards James' valley, one tiny room was his parlour, with bedroom above, and conveniences; adjoining it on the right is a desirable residence, which was occupied by the suite. The Briars is a delightful country seat, and, when it was the fashion to sell ships, forts, and buildings, there arrived an order to dispose of this. There was no George Robins to descant on its beauties, and of course it fell to Mr. Solomans, the man of cash, and king of St. Helena, for £700, to be paid by yearly instalments of £100. The pavilion and grounds he retains, but the building attached, called General Bertrand's house, lets for fifty guineas a year; the gardens alone are said to be more than worth the money.

A feature of the scenery at the Briars is the water-fall if such a driblet can be so called. It has a great drop, but looks the merest thread of water; and certainly in the scale up to Niagara, may be called the Zero.

Leaving the Briars we had to regain the road, up which we walked and rode by turns, so steep and heavy for the horses are most of these ascents; at length the summit was attained, and fine roads running through miles of country were before us, this was St. Helena, with a fine breeze generally, which is so acceptable after the drag up.

On the estate of Mr. Young, collector of Customs, whose house is the white building which is seen from the roadstead embowered in dark woods, are those plantations of firs which so resemble the cedar groves of Bermuda, and it is near this on the left that our attention was directed to one of the wildest scenes in the island, deep chasms and winding valleys without a particle of verdure, the steep sides descending in crags and strata of variegated lava, forming a vast scene of volcanic desolation.

Descending the side of a hill covered with brushwood and furze, we reached Napoleon's Vale, the chosen site for his future tomb. It is a secluded spot with a few willows and shrubs, and is a small plot of ground situated at the far end of one of those terrific-looking volcanic

ravines, and is said to be four miles from James town. A house of refreshment is near the spot kept, by a Mrs. Talbot, who rents the ground and tomb. Her charge to enter the tomb is 3*s*. 6*d*., and then for a glass of water from the adjoining spring 6*d*. is expected, a trifle to the old sergeant and the woman, and then a fee for a twig or so of willow, about 5*s*. 6*d*. in the whole. Two of the original willows have been taken to France, and of the third there is only the trunk left, and bit by bit of that is being rapidly borne away. For the satisfaction of future travellers it may be mentioned, that several young trees have been planted expressly for them.

There were a great number of people at the vale, and parties were continually arriving and departing. The Thunderer, Belleisle, Beagle, the 75th and 87th regiments, besides a number of merchant vessels were in the roads, and most were for taking advantage of the short stay, indeed it resembled a grand gala day, for wherever one looked there was groups of people, some in carriages, others on horseback, but by far the greater number, pedestrians. Mrs. Talbot was truly delighted, she was full of Napoleon, and the Prince de Joinville, and of Col. Mountain having marched the 26th Cameronians to the tomb, and of her allowing the soldiers to go in gratis, &c.

The iron railing still remains, the gate is locked, and the tomb covered in, the 3*s*. 6*d*. therefore must be paid. The old sergeant, who receives £30 a year from the French government for the care he took of the tomb, acts as Mr. Showman: there is a ladder, and most persons descend; you are then informed that there Bonaparte laid 19 years, 5 months, and 8 days; that when the coffin was opened he measured 5ft. 5¾in., and that he appeared just the same as when buried, cocked hat, epaulettes, stars, orders, &c. The Emperor was landed at St. Helena, the 16th of October, 1815, and his remains were embarked on the 16th of October, 1840, just a quarter of a century.

At one o'clock we left for Longwood, and at a turn of the road on the right, came in view of a most extensive and fertile valley; it was richly diversified with hill and dale, with fine meadow land, and pretty country seats, whose clustering trees of dark forest green were seen in pleasing contrast with the rich carpeting of the country; there were many rivulets running in the bottom, and here and there, but very scanty, a few sheep and cattle were grazing. It so reminded some of us of Devonshire scenery, that it was remembered as the vale of Devon. It might have been, as the volcanic gorges where on our left, that the contrast gave it such a charming appearance. The further ride to Longwood was uninviting, black, and misty; we got there at a quarter to two, and paid 2*s*. to get the gate opened and view the house, which we found to be a barn; the whole of Longwood, containing about 1,600 acres of ground, being farmed by a gentleman late of the Hon. Company's Service. Such is the metamorphosis this famous residence has undergone, that it is difficult to conceive the great Napoleon there lived and ended his days. In one room is stored up potatoes, in another lumber; one has a mill in it, and just by the mill is the spot where he breathed his last. This is a hallowed spot to all Frenchmen, and French names are written over every inch of the entire building,—the walls, ceiling, every nook or possible place, and some of the comments are

very curious, as if being much in the same state when Napoleon resided there, &c.

We were informed, however, that it had previously been occupied by the Lieut.-Governor of the island, and had been fitted up expressly for the reception of the Great Man, with every care to convenience, and that it possessed as much of elegance as it was possible at that time to bestow. At present, as a store-house, every trace is gone, and not a vestige now remains.

(To be continued.)

On the Reduction of Inclined to Horizontal Angles.

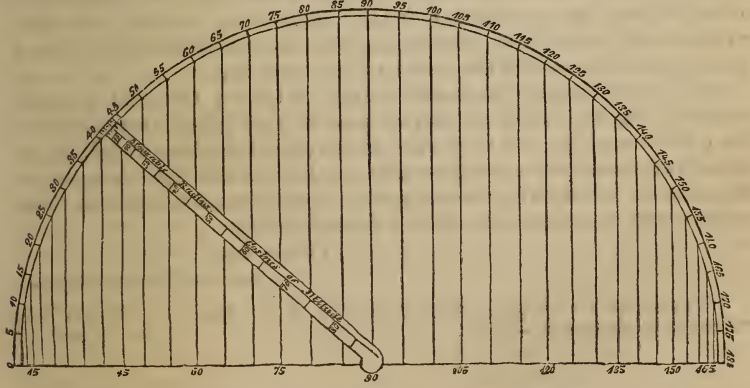
By Lieut. A. G. Edye, R.N.

9, *Mecklenburgh Square, May 6th*, 1844.

Sir.—The accompanying simple diagram having suggested itself to me for the speedy reduction of the inclined angle between the sun and an object, to the horizontal angle, I take the liberty of forwarding it to you, with an example of its application to practice, for insertion in your useful Magazine.

The principles of this diagram are lines of cosines, drawn on a semi-circle, and which I call cosines of distance. To the centre of this semi-circle is attached a moveable radius, which is also divided into cosines called cosines of altitude. The following example will shew its use: Suppose the true angular distance between the sun's centre, and the object to be 45° 0′, and the sun's corrected altitude 20° 0′.

To the *cosine of distance* 45° on the semi-circle bring the *cosine of altitude* 20° on the moveable radius, and you will find that the extremity of the moveable radius on the arc will be found at 41° 12′ within a few minutes for the reduced angle: if the lines of cosines on the semi-circle and radius are correctly drawn, and their scale sufficiently large, the reading off will be the same as if the operation were performed by logarithms.



The diagram I send you is of small radius for convenience of inser-

tion, and only divided at every 5°, but for practical use, the larger the scale on which it is constructed the greater will be the accuracy of reading off; every degree and quarter degree at least should be drawn in lines of cosines.

A diagram carefully drawn on card board of eighteen inches radius, would be found to approach pretty near the truth; but of course greater accuracy would be obtained if it were made on a metal plate.

The usual method of reducing Sun's Hor. ∠ is as follows:—

Take for example Cor. Dist. Sun, and object 45° Alt. Sun 20°.

Dist. 45° 0′	Cosine	9·849485
Alt. 20 0 :...	Secant	0·027014
Red. Hor. ∠ ⊙ 41° 12′		9·876499 Cosine.

The principle on which the diagram is constructed, being lines of Cosines,

Dist. 45° 0′	Cosine	9·849485 + 10 to index.
Alt. 20 0	Cosine	9·272986
Red. Hor. ∠ ⊙ 41° 12′		9·876499 Cosine.

In the application of this angle to the sun's true bearing (supposed to be already found) + or — according as the object is to the right or left of the sun's centre, it would, in strictness, require a further reduction for the convergency of meridian, but in practice (under ordinary circumstances) this might be dispensed with, the quantity of correction being but small.

I am, &c.,

ADOLPHUS G. EDYE

[We commend the foregoing to the attention of our Nautical Surveyors.]

NAUTICAL SURVEYING.

May 8th, 1844.

MR. EDITOR.—You are aware that, when a base line, in surveying, is obtained from two latitudes, it is the length of an arc of a great circle of the earth between the adopted stations, and not the straight line, or shortest distance, called the chord of the above arc.

If it is not giving too much trouble, or taking too great a liberty, I would beg the favour of you, or some of your gifted correspondents, to publish a plain and easy rule to compute the above chord, for the benefit of those class of seamen who are seldom afforded the means or opportunity of acquiring the necessary qualifications to do it for themselves, your favourable attention will much oblige

Yours, &c.,

AN OLD SUBSCRIBER.

[We shall be very happy to hear from any of our Surveying Officers with reference to the above.—ED.]

EXPERIMENTAL BRIGS.—*From the Hants. Advertiser.*

THE whole of the experimental 12-gun brigs are now off the stocks, and are being fitted for commission with as much rapidity as possible. The *Mutine* and *Espeigle* were lately launched at Chatham dockyard. They were taken into dock the same tide, *Mutine* having previously been masted. *Mutine*, laid down in October last, was destined and has been constructed by Mr. Fincham, the master shipwright of Chatham dockyard, who was formerly, for many years, superintendent of the late school of naval architecture at Portsmouth, in which he was connected with Dr. Inman, professor of mathematics, in conducting the professional duties of that establishment. The following are her principal dimensions as ordered and as built :—

	As Ordered.		As Built.	
	ft.	in.	ft.	in.
Length between perpendiculars	102	0	101	11
" of keel . . .	81	2¼	81	2
Breadth, extreme . . .	31	10	31	11
" for tonnage . . .	31	6	31	6
Moulded	31	0	31	0
Depth in hold . . .	13	7	13	7
Tonnage, old rule . . .	428	36-94	429	36-84
" new . . .	264	08		

Espeigle was built in ten weeks, and is the joint design of Messrs. Read, Chatfield, and Creuze, the committee of naval architecture at Chatham, and who were formerly students in the late school of naval architecture. Her principal dimensions, as ordered and as built, are—

	As Ordered.		As Built.	
	ft.	in.	ft.	in.
Length between perpendiculars .	104	8	104	8
" of keel . . .	82	8	83	7¾
Breadth extreme . . .	31	8	31	9½
" for tonnage . . .	31	4	31	6½
Moulded	30	10	31	0⅓
Depth in hold . . .	13	1¼	13	1¼
Tonnage, old rule . . .	431	86-94	442	57-94
" new . . .	262-456			

We have before stated that the object contemplated in building these five brigs appears to have been to produce a class of vessels superior to the old 10-gun brigs, and at the same time to illustrate the comparative merits of the different principles which these gentlemen respectively hold in the science of naval architecture.

Principal dimensions of each of the five new experimental 12-gun brigs :—

	Mutine.		Osprey.		Flying Fish.		Espeigle.		Daring.	
	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.
Length between perpendiculars . .	101	11½	101	0	103	1	104	8	104	0
" of keel . .	81	2	80	6¼	81	8	83	7¾	83	1¾
Breadth, extreme .	31	11	31	10	32	4½	31	9½	31	4
" for tonnage .	31	6	31	6	32	0½	31	6½	31	0
" moulded .	31	0	31	0	31	6½	31	0½	30	6
Depth in hold . .	13	7	13	6	14	3	13	1¼	15	2
	36		91		76		57		3	
Burden in tons . .	428—		424—		444—		442—		425—	
	94		94		94		94		94	

The Loss of the Elberfeldt.

April 26th, 1844.

Sir.—From the remarks made by Capt. Washington, R.N., in the April number of your Magazine, on the loss of the Elberfeldt iron steamer, he appears to view this misfortune in a more alarming light than is quite correct. This vessel was built for the navigation of the Upper Rhine, and was never intended to carry passengers across the British Channel. Her dimensions were 176 feet long, 21 feet beam, and 11 feet 6 inches deep, with a pair of *oscillating* engines and *tubular* boilers of fifty-five horses power each, by Messrs. Miller and Ravenhill of London, and her draught of water was only 2 feet 8 inches.*

From a consideration of these particulars it will be evident that the weight of the machinery was very much concentrated in the vessel, and that the displacement of that portion in which it was placed would not be sufficient to carry the weight without sinking deeper than 2 feet 8 inches.

A part of the weight of the machinery must therefore have been supported by the ends of the vessel, that is, the parts of the vessel before and abaft the machinery would have a tendency to rise, and the middle would have a tendency to sink deeper in the water. The capability of the vessel to resist these forces and to keep her shape uninjured would depend on the power of the bottom plates to resist *extension*, and on the power of the topsides, shelf, or decks to resist *compression*. As the plates of the bottom could not be sensibly elongated or extended without their splitting open, it is probable that at the first, when the pressure came on the topsides, they became *buckled* or bent in a slight degree either inwards or outwards, till the woodwork of the deck came to a bearing, and resisted any further change of form. It may be remarked that as the strength of iron plate lies only in the direction of itself, it is much safer to trust to its bearing a strain of extension than one of compression, as in the former case, there is no tendency in the plate to change its shape, and thus to have the strains brought upon it in a weak direction, but in the latter case it is evident that if a strain of compression be brought on a large flat surface of plating like the flat side of the Elberfeldt, there will be a great disposition for it to warp or buckle, and if this alteration in form is allowed to go too far, the iron will tear and the parts at the rupture go past, or overlap each other.

If this buckling of the plating be not carried so far as to cause the actual rupture of the plate, yet if it is buckled and then pulled straight again, and this action repeated frequently, like the frequent bending of a piece of iron backwards and forwards, the texture will be destroyed, and a fracture will ultimately take place.

This latter was very probably the cause of the accident in the Elberfeldt, though the accounts which have been published have been very meagre, and no statement has appeared from any of the parties concerned. The topsides of the vessel may have been compressed and slightly buckled without having been seriously injured previous to her leaving the Rhine to cross the channel, and when she got into a sea-way, the topsides would be straightened, whenever either the bow or the stern was unsupported by being out of water. They would then be alternately bent and straightened in the manner referred to above, till the texture of the iron was destroyed and it gave way. The rupture in the Nemesis seems to have been precisely similar, and there is no doubt but that all on board had a very narrow escape with their lives.

The remedy applied in her case by Capt. W. H. Hall, R.N., was most judicious, because after the mere rent had been made good and rendered watertight, the balks of timber which he applied along her sides had the effect of preventing for the future, this buckling or bending and straightening again, by their inherent stiffness or rigidity. Let these instances of failure be looked to

* Civil Engineer and Architects' Journal for June 1841.

as a warning, in the manufacture of future iron vessels, and if they thus tend to prevent the recurrence of such accidents, they will not have been without their use.

I am Sir, &c.,

M.

To the Editor, &c.

The Loss of the Brig Colina.

[We give the remainder of this trial and its results from the *Shipping Gazette*, but are still at a loss for the motive and its origin that induced the master to sink the vessel.—Ed.]

(Concluded from p. 302.)

Central Criminal Court, April 18th.—The Trial of William Read.

Captain W. Simpson, cross examined by Mr. Sergeant Shea: The letters produced are in my writing. I wrote two of them while the Colina was in the Tyne, and one of them from Shields. The Colina is registered at 150 tons, but I took in at Newcastle about 230 tons of coals. The freight of these coals to Rotterdam would be about 90*l* or 95*l*.. and the stores and provisions of the vessel would be worth about 30*l*. When the vessel sank she was 61 miles from Rotterdam, and about 80 from the Texel. The mate and a boy slept in the cabin with me, but they were on deck when I bored through the side of the vessel. I can't say that the boy was not in his berth. I believe he was not, for he was in the mate's watch. I believe that the first person I spoke to about having sunk the vessel was Read. I do not think that I told anything about it to any one else until March, 1843. In 1843 Mr. Page questioned me as to the fact of the Colina having been sunk on purpose, and I said there was no truth in the story, for the occurrence was quite accidental. The vessel was rather deep in the water in consequence of her heavy cargo. I bored the holes about four or five feet under water. It was done with a trenail auger. I can't say what the diameter of such an auger would be. Probably about an inch and a quarter. I don't know that the size of these augers vary according to the tonnage of the vessel upon which they are employed. I called the mate down to find the leak. He did not call me down, nor was I on deck. When I was at Glasgow I believe that I threatened to be revenged on Read for dismissing me from the Ranger. I was intoxicated at the time. If I said that Read should never build another ship at Ipswich, if I could help it, I must have been intoxicated. The letter produced is in my handwriting. The letter was as follows:—

"Newcastle, Jan. 4, 1844.

"Sir.—I received your letter this morning, dated the 28th. You wish to know the particulars of what is stated. I can assure you that I never said to any one that I was paid to lose the Colina, nor that I had lost her purposely, or that I had been uncomfortable ever since.

"This must all have arisen from the letter sent from Barking; but, Sir, I can clear you of the report, and myself likewise. I expect to load next Saturday, and, if so, I am in hopes that I shall be at home in a few days, and get all these false reports proved to be false.

I am, Sir, yours respectfully,

"E. Page, Esq., Ipswich. William Simpson."

I did say to Gardner that I had sunk the Colina purposely, and I afterwards wrote the letter which has been read.

This closed the case for the prosecution.

Mr. Sergeant Shea then rose and said,—Gentlemen, it now becomes my duty to answer before you this most serious charge against the prisoner at the bar, who is accused on the evidence principally of two men, Simpson and Gardner;

and I am quite confident that no man of the prisoner's character ever left a court in the whole of England with a verdict of guilty recorded against him upon such evidence. I make no complaint against the prosecution. The prosecutors, as they are familiarly termed, consist of an Assurance Company, and cannot be supposed to have any feeling of personal animosity against the prisoner; and I believe that their only intention in prosecuting this charge is a sense that in such a case as the present justice must be done. It is the curse of prosecutors in England that, on the commision of any crime, they, on hearing *ex parte* evidence and statements, generally make up their minds to the belief of the guilt of the accused. This belief is strengthened by statements made from day to day, and they come into court certain that the prisoner must be convicted on evidence which, after all, is viewed by the jury and judge with caution. Of this class I hope Mr. Alexander is one, and I believe that he acted conscientiously and honestly when he, on hearing the statements made, felt it to be his duty to bring this case to trial. I will prove that Mr. Alexander has fallen into this common error by the evidence which, if you do not already feel convinced of the untruth of this charge, I shall feel it my duty to produce. The prisoner lived at Ipswich, and his character has been unimpeachable up to the present time, as might have been judged from the admission of my learned friend in his opening statement, and this fact was well known and admitted by Alexander, who had good opportunities of knowing his private life. The first question I will ask is, what motive is alleged on the part of the prosecution for the commission of this grave offence? In its consequences it involved the loss of honour, character, and a short time ago of life, and which even now is punishable with transportation for life. It has been insinuated on the part of the prosecution that there must have been some stronger motive than that of pecuniary gain. No such motive had been shown not even hinted at; and with respect to the pecuniary gain, a few words would, set that matter to rest.

My friend has affirmed that the Colina was worth only 700*l.*: that she was an old vessel, worm-eaten, and totally unseaworthy; and the point of all this was to show or induce a belief that she had been insured beyond her value. He asks if there was any reason that Simpson should willingly perjure himself for no ostensible cause, in order to prepare your minds against the time when the character of the man should be known to them. Gentlemen, you probably remember a case which occurred a few years ago, and which is referred to in Smith's letter—the case of the Dryad. This was a case of parties casting away a ship to receive the sum for which she had been insured. The motive in this case was admitted to be proved by the fact that the vessel which was cast away was insured for a sum considerably more than her value, and in all these cases some such motive must be proved.

In the present case there is no proof of the kind. There is no proof that the ship was in a bad state, and that she was not, for her age, as good a ship as any one in England. Why did they not call some person by whom the ship had been examined since she nearly went down on the western coast of England? There is not the smallest proof that she was not in a good state, and with her cargo and stores fully worth the amount for which she was insured. Mr. Tovell, the former owner of the ship, admitted that she was worth from 950*l.* to 1000*l.* and that she might even sell for more. The sum allowed by Read and Page in exchange for her is 900*l.*, and from the evidence of the auctioneer it is proved that it did suit them to take 950*l.* for her. In fact, the value of the ship was close upon 1,000*l.* Well, add to that the amount of the premium for insurance, which at 9 per cent. would amount to near 115*l.* Then come the ship's stores, which, by Simpson's own calculation amounted to 30*l.* The freight of her cargo would amount to 97*l.*, all of which would be lost if the vessel did not arrive at her destination; and thus, on their own showing, the loss of the vessel would occasion an actual loss to Read and Page.

Then what motive could Mr. Alexander assign for a crime by which Read

would not only suffer a pecuniary loss, but by committing it would place himself for the remainder of his life at the entire mercy of the very worst of men, and by which he would subject himself to loss of honour and character, besides a banishment for life? Can you believe, on the testimony of such a man as Simpson, that a man of Read's acknowledged character would go and commit such a fruitless stupid crime to a certain loss and to gain no one single object? Do you believe that he would sink the vessel purely for the sake of committing crime? When a man of the standing and character of Read is accused, you will surely expect that the characters of the witnesses against him will bear the strictest investigation. My learned friend was aware that the character of Simpson would not stand such a scrutiny, and he therefore mentioned it in his opening, and says there is a total absence for all motive for perjury. I however, can prove to your satisfaction that such a motive really exists.

The law admits the evidence of an accomplice in a felony against the principal actor, but it does so with considerable reluctance, because, having committed one crime, there is no certainty that the accomplice will not commit another by perjury, especially in those cases which may from their nature furnish an adequate motive; but it is only a very short time since the law admitted the evidence of a convicted felon against a man on his trial.

I do not complain of the law in this matter, though it seems to me rather strange; but can you place any confidence in the evidence of a man who comes into the box scarcely cool from the excitement occasioned by his crime, and whose lips, stained with falsehood, profanes the book in which the sacred gospel is contained? My learned friend in this case was aware that the unsupported evidence of Simpson would go for nothing, and, therefore, produced two witnesses whom he thought were respectable men, in order to substantiate the statements made by him. The first of these men is Brady, who at once shewed what reliance might be placed on his evidence by admitting frankly, without any shame, that when he sunk his employer's vessel by his own negligence, he told the steward of the Ramona to ascribe the destruction of the ship to fire. When his lordship questioned him as to his reason, his answer intimated that no young man could get on without telling falsehoods.

With regard to Smith, who professes to have been so eager after the interests of the owner of the Colina, he in early life appears to have been dismissed for taking too great a fancy to some parcels of halfpence belonging to his employer. You remember the letter from him to Read. It was read yesterday, and can you for a moment doubt that that letter was sent with the view of obtaining money, and that he expected by return of post a bank note or post-bill? Remember his statement about the advice of legal gentlemen having been taken on the subject, which was totally untrue, and his non-fulfilment of his threat about giving information to the insurance company; and can you on taking his conduct into your consideration, consider that he has in any way substantiated Captain Simpson's evidence? He laid great stress upon the fact that no signal of distress was ever hoisted. Both he and Brady agreed in this, but they also say that the ship was so curiously situated that they at once bore down upon her. Is not this sufficient evidence, that in fact, the ship by her position showed that she was in the greatest extremity of distress; and of what use would it have been to hoist signals at a distance of 80 miles from land? No assistance could reach them, and any vessels near would know it at once from her position, as was evident from the smacks bearing down upon her instantly on perceiving her. Besides, the crew were not pretended to have been privy to this plan of sinking the vessel, and they would at once have made signals if they considered it necessary for their own safety. Nor would they have left her in an open boat 61 miles from the land, if they considered there was any reasonable chance of bringing her to land. If there had been any neglect, my learned friend Mr. Clarkson had it in his power to call them. Why did he not do so? He had all their names, and could have easily got at them, if he pleased.

With respect to the witness Gardner I have but few observations to make. He stated that he was the confidential clerk in the firm of Read and Page, and knew that they had purchased the Colina, and that she had gone to Rotterdam under the command of Mr. Simpson; and his story is, that before any letters had reached Read relative to the loss of the Colina, a Mr. Taylor entered the counting-house and directed Read's attention to a paragraph in the *Shipping and Mercantile Gazette*, which related to the loss of the Colina. Read, in the hearing of that witness, says that Mr. Simpson had promised to sink her. He hears this statement made—he knows that the vessel is insured, and that if she was sunk purposely it would be a fraud on the insurance company—he knew that his silence on the subject would permit the perpetration of a gross and shameful fraud, to which that silence would render him an accomplice by law; and he sits down quietly, goes on with his usual avocations, and takes no more notice of the disgraceful fact he has overheard than if it had never reached his ears at all, and tells it at a period little short of two years after, when he is compelled to disgorge the fact by regard to his safety. Will you put any faith in the statement of such a man, who is as deeply steeped in the crime as Read himself, if his statement is true, who has just contrived by a timely statement to keep himself out of the reach of the law, and who has to-day the assurance to admit all this in the face of the court? And supposing that what he states is untrue—a fact by no means improbable—is not the fact of his coming here to-day and swearing to all this against himself and others, sufficient to stamp him as a more disgraceful character than he would be if he has told the truth.

Again, with regard to Simpson's evidence, was there in his whole statement any mention of reward which he was to receive from Read for sinking the vessel? Was there any promise on the part of the prisoner, or any hope expressed on the part of Simpson, of reward for the destruction of the Colina? No such thing. Was there any means of secret or private communication between them, as there should have been in such a case as the present? No; it is all said in the presence of Gardner, who would not as an honest man conceal it, and who as a rogue had no inducement to do so. Simpson was heard to say at Glasgow that he would be avenged on Read. He does not deny this, but qualifies it with the statement that he was drunk, he will not deny anything, but says he was drunk as a ready means of evasion. Why should it be believed that he was drunk then? No reliance can be placed on him. When the ship was lost he sent in false protests to the insurance office, and why should he not tell an untruth about the matter now as he did then, and as he did in his letter to Mr. Page? Independently of all these considerations, was he not now strongly actuated by his impending sentence? He saw the chain gangs of New South Wales before his eyes; he knew that the acquittal of Read would send him to join them, and he felt that his conviction would operate in mitigating his sentence, and he is right in his thoughts. Though he is a being without honour or principle, without any religion or thought of any, yet he must be influenced, as are all mankind, by the prevailing passions, hope and fear; and even if his principles were more strict, his evidence would be influenced by them. Under all these circumstances I contend, that all of Simpson's evidence should be doubtfully and cautiously received, and no credence given to it, unless you consider it sufficiently borne out by the remaining facts of the case.

The learned gentleman, at the conclusion of his address, which occupied two hours, sat down apparently much fatigued.

Mr. Doane then proceeded to call the witnesses for the defence.

The first witness called was Mr. James Hudson, who said—I am the surveyor of Lloyd's at the port of Stockton. I examined the Colina in 1840. She was then perfectly seaworthy, and would certainly have lasted without repair for four or five years. She was then worth 7*l.* per ton. Her tonnage was registered 156. She underwent repairs to the amount of 190*l.* She was

placed Æ on Lloyd's list, and that is next to A 1, the first and best on the list. She was quite as good as any ship of her age and timber, and in fact much better than many of them.

William Revell, foreman to Mr. Bellamy, in whose yard the Colina was repaired at Stockton, proved that she was perfectly seaworthy, and would have lasted without further repair for seven or eight years longer.

Mr. Carter, a notary, produced a copy of the protest drawn up and signed by Simpson relative to the loss of the Colina. The document was read, and merely stated facts which have already been detailed in evidence.

Henry Sadler examined: I was mate of the Colina when she was bound for Rotterdam. I remember the morning when she sank. I was on deck when she sprang a leak, at about half-past eleven or twelve at night. At this time it was Simpson's watch below. He pumped out the ship. It was customary to pump her out every four hours. She made about three inches of water in four hours. At the time she sprang a leak there was a cross-grained sea, which would try a vessel very much. It did not, however, affect the Colina much. As soon as the leak was sprung I pumped her out, but finding that the water gained, I went and called the master, who was in bed at the time, and told him that the ship was making water fast. He worked himself at the pumps. There were seven men on board, all of whom worked at the pumps. Simpson gave the necessary directions for saving the vessel. The men worked at the pumps without intermission until one in the morning, when, there being no hope of saving the ship, the boat was got out. There was no galliot near the vessel, but we were picked up by a smack, and put on board the John Bull steamer.

Mr. Bodkin cross-examined this witness, but elicited nothing material from him.

All the hands who were on board the Colina on the voyage to Rotterdam were examined separately, and they all confirmed the story of the mate, and their evidence tended to contradict that of Simpson as to the ship being sunk purposely.

Mr. William Taylor: I am a shipowner at Ipswich, and have been so for 15 years. I remember the loss of the Colina. I went to the counting-house for the purpose of communicating to Mr. Read what I had seen in the paper. I saw Mr. Read in the yard, when I asked him if he had heard anything about the Colina? He said, "No." We then went into the counting-house, where we found Gardner and Page. When I informed Mr. Read about the loss of the Colina, he never said that the master had promised to sink her. Not a word to that effect ever passed.

Mr. Clarkson did not put any questions to this witness.

Hannah Roper said I am 15 years of age, and reside at Ipswich. I remember that in June, 1841, Simpson came to Read's place, and said that the Colina had been lost off the coast of Holland.

Mr. Clarkson raised an objection to any evidence of a conversation being given by a girl who could at that time have been only 12 years of age, and which had taken place three years back.

This objection was overruled after some discussion.

Witness, in continuation: Simpson said that a strong sea had struck her, and that she had sprung a leak, and had gone down almost instantly.

Mr. John Cobbold (the name of this witness was mentioned in the *Shipping and Mercantile Gazette* of yesterday as Cobbs, by mistake). I am an attorney, residing at Ipswich. I recollect that about the beginning of July, Read brought me a letter, which I was asked to answer. I wrote an answer to it, but I do not think that I have kept a copy of it.

The letter written by Smith was here produced, and identified by Mr. Cobbold as the one to which he had written an answer.

Examined by Mr. Doane: I was the chief magistrate at Ipswich. I have known Mr. Read for many years as a man of the greatest respectability and integrity. I never heard any story against Read until now.

Several of the former mayors of Ipswich, and some of the aldermen, together with many gentlemen of the highest respectability, then stepped forward, and gave the strongest testimony as to the respectability and character of the prisoner.

The whole court, both bench, bar, and the body of the court, seemed crowded with his witnesses and friends.

At the conclusion of this testimony, Mr. Clarkson rose, and replied upon the whole case at considerable length, and contended that the witnesses in defence had by no means thrown any doubt upon the original evidence of Simpson and Gardner.

At the conclusion of Mr. Clarkson's address, which occupied the court more than an hour and a quarter,

Mr. Justice Maule went briefly through his notes of the evidence. He said that the point on which the greatest stress was laid on both sides was the question as to whether or not the ship was insured for more than its value. From the statements of the witnesses and the papers produced, this did not appear to have been the case, as the ship, with her cargo, stores, and other property on board, was, in fact, worth fully, if not more than sufficient, to cover the amount for which she was insured. The witnesses also for the prosecution were rather of a suspicious character, and it certainly appeared that their evidence should be viewed with suspicion. The learned judge also remarked on other portions of the evidence as bearing favourably for the prisoner.

The jury instantly returned a verdict of "Not Guilty."

The decision was greeted with loud applause by the friends of the prisoner.

Sentence on Simpson.

William Simpson, who pleaded guilty to having sunk the Colina, was then placed at the bar.

On being called up, and asked if he had anything to urge against the sentence of the law, he said

"I have spoken nothing but the truth."

Mr. Justice Maule: If you have said nothing but the truth, you are guilty of the crime of casting away a vessel; and it appears by your own statement—and we cannot have better authority—that you did so without any adequate temptation, at least if there was such instigation. The jury have not inquired into it. Your offence was one which was attended with danger to life. You are either guilty of the crime of perjury, which is not so punishable as that of casting away a ship, or you have in reality sunk the ship.

Prisoner: I did so, my lord.

Mr. Justice Maule: Very good; your case is one in which I can see no mitigatory circumstances; and the sentence of the court is, that you be transported beyond the seas for the term of your natural life.

The prisoner was then removed.

Nautical Notices.

Ichaboe Island.—We extract the following recent information from Captain Wade's plan. :—

"At Ichaboe Island it is high water at full and change of the moon at 2h. 15m. Rise on springs seven, neaps three to four feet. At the anchorage nearest to the island the first half of the ebb runs faintly to the southward: this probably is an eddy. Throughout the whole neighbourhood the stream almost constantly runs to the northward about one mile per hour. The prevailing wind is S.W.b.S. (compass) consequently the best passage to the anchorage is through the south channel, having the advantage of wind, current, and clearer ground. The rollers are similar to those at St. Helena.

During November, December, and January, the thermometer generally ranged from 55° to 65°, at 1 P.M. occasionally at 50° or 70° on board the ship in the shade. Water generally 50° to 52°, sometimes 55°. The breeze is frequently strong from the southward; no rain, but dense fogs and heavy dews, occasionally thunder and lightning. The dryness of the air is so great as to produce disagreeable effects on the face, mouth, and eyes. No water to be had nearer than the village, and there it is very brackish and scarce. Barometer ranged during the above months 30·10 to 30·25.

The red mark on the island denotes the extent of the guano. The strata of rock on the shore dip to the northward, so probably anchors will hold best with south winds.

References to Capt. Wade's Plan.

When the rollers are heavy they break above a mile from the island, but usually about half a mile from it. The line surrounding A denotes the limits of the best anchorage in the summer months. From the bay D in which the

landing is difficult on a sandy beach, there is a pathway to a village of about fifty inhabitants, eight miles distant over a bad road through the desert. At E is a sandy beach; at F there is smooth water inside the dotted line shewing the limits of breakers; at G black cliffs about thirty feet high. Between the island and the main land is a bank, on which at the northern end is a six-feet rock at low water, on the other parts of it the depth varies to three, four, and five feet. The view of the island is from the anchorage.

Royal Board of Customs, Lisbon, March 8, 1844.

The Berlings Light and the Peniche Light.—The Royal Board of Customs at Lisbon has given notice, that in order to obviate the inconvenience arising from the almost perfect similitude of the revolution of the machinery of the Berlings light and the light on Cape Carvoeiro, at Peniche, the movement of the latter has been altered, the great flash of the light being repeated consecutively every thirty seconds, but producing, with but slight difference, a continued light, which makes the said lights perfectly distinct the one from the other.

(Signed) Cypriano Manoel da Silva Moraes,
Secretary.

Rock in the Caycos Passage.—The Columbine, Robertson, from Aux Cayes, March 2, had strong winds till the 14th, with a lee current coming through the Caycos passage. On April 2nd, at 3 p.m., being in lat. 35° 25′ N., long. 49° 1′, saw the water discoloured to windward; it had a brown appearance, extending above 100 feet in a S.S.E. direction, and about 30 feet across. It had all the appearance of a rock under water; the vessel was then a little more than her length north of it, steering E.N.E.; immediately on the weather bow two more brown spots were seen close to each other, about 150 fms. or more east of the one she was abreast of: the first lying in the same direction and about the same size; the second or easternmost one of an oval shape, about 60 or 80 feet across, and appeared to be nearer the surface of the water than the other two. There was a light breeze from the S.E., the water was smooth, and not a cloud in the sky at the time; but there was a swell from the N.W. The sea did not break over these places. The discoloured water last mentioned was seen for nearly a mile.—*Shipping Gazette.*

Lighthouse at Brindisi.—*Naples Feb. 29*, 1844.—Upon the mole of the fort facing the sea at Brindisi, at the height of 123 palms, equivalent to 32.54 metres, above the level of the sea, there has now been established a lighthouse, illuminated in the ancient manner. The latitude is 40° 39′ 17″ N., long. 15° 37′ 57″ meridian of Paris, and 3° 42′ 50″ meridian of the Royal Observatory at Naples. This new light has been lighted since the 20th of January last.

[In the month of February last the light is reported as not established.—Ed.]

Trinity-house, London, May 14th, 1844.

Lighthouse on Plymouth Breakwater.—Notice is hereby given, that the lighthouse which has been for some time past in course of erection on the west-end of the Breakwater, in Plymouth Sound, under the direction of the Right Honourable the Lords Commissioners of the Admiralty, is nearly completed; and that the light therein will be first exhibited on the evening of Saturday, the 1st June next, when the floating light vessel will be taken away.

The light will burn at an elevation of 63 feet above the level of high water

spring tides,—and will appear Red in all directions seaward,—and White within the line of the breakwater.

Note :—A Bell will be rung in foggy weather.

By Order,

J. Herbert, *Secretary.*

Plymouth Breakwater Lighthouse.—This lighthouse may be regarded as a first rate specimen of masonry; it is built of a hard close grained light-coloured granite, without paint or other colouring either inside or outside. The doors and lantern are of bronze, and the whole structure has been finished with more than common care. The light is on the reflecting and refracting principles combined; that is to say, the lamp burns in the centre of the lantern with a curved refracting apron of transparent, but thick glass, to transmit the rays of light in a *horizontal direction* seaward, and in order that no light be lost, either by going downwards into the light-room, or, upwards into the roof of the lantern. There are a number of reflecting plane surfaces, so placed as to receive these incidental rays of light; and to transmit them by reflection *seaward* in a horizontal direction; hence it results that *all the light* from the lamp, is sent away in the direction of the water's surface, that there are no *shadows* within the lantern to interrupt the free dispersion of the rays of light as they issue from the burners.

The light-house has been completed by the Admiralty, and will be under the management of the Trinity Board, without any additional charge to shipping frequenting the magnificent harbours at Plymouth.

The light-house on with Mount Batten tower leads to the S.E. of the Hand Deeps, and is also the best leading mark to clear the Dragstone and Penlee shoals.

Light-house on with Penlee point leads to the N.W. of the Hand Deeps.

W. Walker, *Queen's Harbour Master.*

Trinity-house, London, May 16th, 1844.

Gull Stream.—It having been ascertained that the Brake Sand has moved bodily to the westward, the positions of the following buoys have been altered in order more effectually to denote the present line of the eastern edge of that Sand: viz.—

The South Brake buoy now lies in 4¾ fathoms water, with	
Waldershare Monument, in line with a Barn midway between the two Windmills next South of Sandown Castle .	W. ¾ S.
North Foreland Light-house in line with the Preventative Station-house on Broadstairs East Cliff .	N.N.E.
Middle Brake buoy	N.N.E. ½ E.
Fork buoy	S.E. ½ E.
South Deal Bank buoy	S.W. ¼ S.
Gull Light-vessel	E.b.N. ½ N.
South Sand Head Light-vessel . . .	S.b.W. ½ W.
The Middle Brake Buoy now lies in 5½ fathoms water, with	
Upper Deal Church cupola in line with the Windmill next South of Sandown Castle . . .	S.W.b.W.
St. Lawrence Windmill, its apparent width east of Ramsgate Pier Light house . . .	North
North Brake buoy	N.E. ½ N.
Fork buoy	S. ¼ E.
Gull Light-vessel	S.E. ¼ E.

Note.—The above depths are those of low water spring tides, and bearings magnetic.

By Order,

J. Herbert, *Secretary.*

Trinity-house, London, May 17th, 1844.

Light at St. Anna, *Brazils.*—The Consul General for the Brazils having communicated to this Corporation, that he has received the following intimation from His Excellency the President of the Province of Maranham, the same is hereby notified for the information of all persons interested therein, viz. :—

"The Lighthouse erected on the Island of St. Anna, Province of Maranham, in lat, 2° 16′ 18″ S., and long. 43° 21′ 20″ West of Greenwich, will *not shew any light* during the months of July and August of the present year, owing to its undergoing repairs."

By Order,

J. Herbert, *Secretary.*

The Madjecosema Islands.—We understand that Capt. Sir E. Belcher in the Samarang has returned to Hong-Kong from his visit to the Meïa-co-shimah Group, commonly called Madjicosemah, having surveyed Batan, Sabtang, Bashee, and Goat islands, of the Batan group; Patchungsan and eleven islands of its group; Typinsan, and four islands of its group. He finds the Meïa-co-shimah people in character nearly the same as those of Lieu-Quieu or Lew-Kew, as pronounced by them, to which they are subject. He met with every kindness from them even to supplying him with horses, sedans, and coolies for his surveying operations, which the exposed nature of the islands, and the prevailing wind prevented his carrying on by boats. Indeed the Samarangs and the natives became very much attached to each other, and parted with mutual regret, and a desire to meet again.

They would not receive money or payment for their supplies (as at Loo Choo) but were prevailed on at the last moment to receive cloth and trifles.

No vessel should approach these islands until the surveys are completed.

The great bay of Hee-chee in that island has received the name of Port Haddington, quite equal in capacity to the largest harbours we have, and landlocked.

Regulations to be observed by British Vessels trading to and from Ningpo.

British Consulate, Ningpo, Jan. 1, 1844.

1. All British vessels entering the port of Ningpo must anchor at Chinhai and report themselves to the Mandarin stationed there for that purpose, waiting till they have been duly visited by that Functionary, and searched, if he shall deem it expedient.

N.B. The following is the form of report required.

I., A. B., Master of the ship C.D. of
Tons burthen, navigated by a Crew of
men, now declare my intention of proceeding to Ningpo, and request that I may be dispatched without delay.

Signed

On board Ship Master Ship
day of 184 .

2. British vessels on arriving at Ningpo will anchor as near to the Consulate (which will be at once known by the Red Ensign flying) as may be done without incommoding the ships already at anchor in the river, or the native junks.

When practicable a person will be sent on board who will point out the proper place to bring up, but they must not on any account go higher up the river than abeam of the Consular Flag-staff.

3. British vessels on arrival at Ningpo will have each a number given them, which must be painted in large letters in white, English on both bows, and Chinese on both quarters, for greater facility of discrimination.

4. Masters of British vessels on arrival at Ningpo must give in a list *upon oath* of all persons that they may have on board; none of these may be left behind without exposing the said Master to a heavy penalty, neither may the said Master take away others than those in the original list without duly representing the same.

5. Masters and Supercargoes of British vessels will be required at this Consulate to present a Manifest of *all Cargo* they may have brought within the mouth of this river, and to attest the same upon *oath*; and should they not discharge all their cargo, they will be required to show the balance of such Cargo as should remain on board to the Chinese Custom-House Officer whenever he may wish to inspect it.

6. British vessels will only be permitted to discharge or load at the place appointed by the Authorities on the Northern bank of the river known by the Chinese name of Lee-kae Taou-tou, and between the hours of 8 in the morning and 4 in the afternoon; and any goods found landing or shipping, from, or on board of, any British vessel at any other time or place, without special license having been granted for the same, such goods will be considered *Contraband*, and as such will be liable to instant siezure; besides, the vessel landing or shipping off such goods in contravention of the Regulations of the Port, will expose herself to be severely fined for each irregularity.

7. Masters of British vessels will be careful not to let their people land at Chinhai more than is absolutely necessary for reporting the ship as she enters and leaves the mouth of the river, and on no account must they permit their people to land and ramble into the country while the vessel is on her passage between Chinhai and Ningpo, and vice versa.

8. Masters of British vessels while lying in the Ningpo river will be required to be exceedingly strict and attentive as to the degree of liberty they allow their men while in port. No more persons will be allowed to go on shore from each ship than what are absolutely necessary for the carrying on of the lawful business of the ship, without being first duly reported at this Consulate, and getting a special license, and such special licenses can only be granted when the men are under the care of an officer.

Let it be borne in mind that for any damages done by sailors on shore, the ship will, in the first instance, be held responsible.

Let masters of vessels also beware of allowing samshoo to be brought alongside.

9. Masters and supercargoes of British vessels about to leave the port will be required to give, at least forty-eight hours notice before-hand, and to keep their Blue Peter flying for that time, that the same may be duly made known.

10. British vessels leaving the port will be required to exhibit their Grand Chop, or port clearance to the Mandarin stationed at Chinhai for that purpose; and must again submit to be searched should the said Mandarin express a wish to that effect.

11. Masters of British vessels leaving the port will be required to pay attention to the conduct and capabilities of those Chinese who offer themselves to pilot ships up and down the river, and they will be further required to give an honest and true certificate under their hands of such conduct and capabilities, in order that in the course of time Consular licenses may be given to the most skilful. These certificates should state the name, age, and appearance of the individual.

12. Lastly, all Masters and supercargoes of British vessels will be required to subscribe to these regulations before being permitted to discharge; and the undersigned will, in the event of any breach of them, reserve to himself the

right of imposing such penalties as the greater or lesser aggravations of the case may seem to call for.

(Signed) R. Thom,
H.M.'s Officiating Consul for Ningpo.

British Consulate, Ningpo, Jan. 16, 1844.

Sir.—I beg to wait upon you with a copy of certain regulations agreed upon between the High Authorities of this place and myself, for the wholesome restriction and government of such British subjects as may resort to Ningpo for commercial or other purposes.

As the Chinese Government hold me, in the first instance, responsible for the good conduct of all my countrymen while here, you will at once perceive that in my own defence, I am compelled to adopt the most stringent measures to repress every thing that may be considered wrong or irregular, and I have accordingly to request that you will grant permission to no one under your command to repair to Ningpo, who is not thoroughly acquainted with, and prepared to subscribe to, the accompanying regulations.

I have the honor, &c.,
R. Thom,
H. M.'s Officiating Consul for Ningpo.

P.S.—I further enclose a copy of the regulations of the port as regards British Merchant vessels, and will feel obliged by your making them as generally known as possible to all parties concerned.

Hints to British Merchants Resorting to Ningpo for Purpose of Trading.

1. It must be borne in mind, that weights and measures differ widely in every part of China, and that consequently there is a great difference between those employed at Canton, and those in use at Ningpo.

Many mistakes have already taken place in consequence, and to obviate such mistakes in future, the undersigned strongly recommends all British merchants having commercial dealings at this port, whether in buying or selling goods by weight or measure, or paying or receiving money by weight, to reduce every thing to Custom-house standard; for which end the standard weights and measures of this Consulate will always be at the service of any merchant who may wish to adjust his own by them, or to have a similar set made.

2. British merchants are reminded that the Ningpo merchants are not men of the same established character and great means as the Hong merchants of Canton. Great care should therefore be taken when goods have been sold to deliver them as per muster, and in good order and condition, before witnesses, lest the market falling, the purchaser should damage them and say that he received them in that state, as a pretext to throw up his bargain; and still more in buying goods every package should be most carefully examined before being removed from the seller's premises, in order to guard against false-packing and other frauds which are very common in this part of the country.

3. There being no longer security-merchants to pay the debts and fulfil the engagements of those who are unfortunate, or of those who commit acts of fraud, British subjects are hereby cautioned against giving credit to any large amount. A barter trade will be found the best and safest in the end; and no matter what the sum may be, whether in making sales or purchases, British subjects are strongly recommended to exact a sale or purchase note (vulgarly called a Hong-chop), without which document, in the event of fraud or failure, the sufferer would find great difficulty to establish his claim in a Chinese Court of Law.

Lastly, while the undersigned has every wish to assist such of his countrymen

as may be unhappily involved in losses from frauds or failures at Ningpo, yet, in justice to himself, he must insist on the transactions brought before him being not only in themselves perfectly *just* and *straightforward*, but moreover of such a tangible and *business-like* shape, that when he takes them up he may have some prospect of bringing them, if not always to a *satisfactory*, at least to an *intelligible*, issue.

Respecting all cases that are not perfectly consistent with what is right and proper between man and man, as all cases of mere suspicion without evidence, or where the British subject has been in part to blame in the first instance, or where, from carelessness and inattention, the circumstances have been allowed to become so complex as to require much explanation and unravelling, the undersigned must for his own credit decline to mix himself up in such transactions; and he has accordingly to request that British subjects will be careful in bringing cases of like nature before him.

(Signed) R. Thom.
H. M's Officiating Consul for Ningpo.

British Consulate, Ningpo, 1st. Jan. 1844.
(True Copy) Richard Woosnam.

Circular No. 8. *To British Merchants, and others, interested in the Trade of Ningpo.*

The undersigned has this day received an Official communication from the Intendant of Circuit, in which his Excellency states that the three following shroff-shops are specially appointed to receive duties on behalf of foreign merchants, and that their receipts for the same will be considered as equally valid with those of his Excellency himself.

1st.—The Kew-an shroff shop, of which the responsible person is Ye-kin-hung, in Government employ.

2nd.—The Yeun-ho shroff shop of which the responsible person is Chung-Kwang-Keen, having the Literary title of a Sang-yeun.

3rd.—The Ken-ho shroff shop of which the responsible person is Ching-Suy-tan, in Government employ.

Duties will be received in pure Sycee Silver 98 to 100 touch custom-house weight, with the addition of one tael two mace per hundred taels (1. t. 2. m. p. 100 t.) expenses for remelting as at Canton; or if the duties be paid in foreign money the said foreign money will be put through the crucible and taken for just so much pure silver as it yields, with the addition of 1. t. 2. m. p. 100 taels for remelting as above.

(Signed) R. Thom.
H. M's Officiating Consul for Ningpo.

British Consulate, Ningpo, 13th, Jan. 1844.
(True Copy) Richard Woosnam.

Communion Plate for the Navy.

We recently announced the fact of an order having been issued for the supply of ten sets of *communion plate* to each royal dockyard, to be supplied to such of her Majesty's ships as carry a chaplain. Our readers will not have failed to comment on this for themselves; but we are unwilling to pass over so very remarkable an event altogether in silence.

We confess that when we consider this fact in all its bearings, we are checked by "thoughts too deep for words;" and we venture to say this, because we are

sure that many besides ourselves have shared this feeling on reading the announcement which we have repeated above.

Perhaps the first thing which would occur to most of us, is simply that we have just heard of this as a *new thing,—that it has never been done yet.* This alone is exceedingly startling, considering that we are supposed to be a Christian nation.

Eighteen hundred years after the Great Christian Mystery was given, and commanded, it has all at once occurred to us that it was *time to obey ;* that there were some thousands of Englishmen, of a class which includes the noble and the peasant, whom it might be as well not to shut out from the use of the chief means of Salvation. It seems to have struck persons at last that there was no absolute necessity in the nature of things, that one of the noblest of professions should lay men under a sentence of excommunication.

We are aware that in one instance, at least, the Holy Communion has been administered on board a Queen's ship on a foreign station; this was done we believe for the *first time about two years ago ;* so that that does not much mend the matter. There may have been other such instances, especially in ships carrying a flag; but the exceptions to the general custom of neglect and disobedience have been very few; and until now it should seem that they have not been encouraged.

Religion, which by the very appointment of naval *Chaplains* seems to be considered of some use and value, has been supposed to go on *somehow,* through the ordinance of preaching, or the hearing of prayers, or the distribution of good books; but THE *Christian Ordinance* has plainly not been regarded as necessary to its LIFE and REALITY at sea, whatever it may be anywhere else. Sunday after Sunday, Festival after Festival, and Year after Year, this systematic contempt for the holiest of all things holy has continued unreproved, not even wondered at. To those who ever looked into the bibles and prayer books supplied at sea, it must have seemed a strange thing that they alone of all Christian people were only to know this great blessing by name; while it must have been especially awkward to the Chaplain whenever it happened to form part of the services which he had to read: we conceive that there must have been on this one point at least, some little "*reserve*" in his teaching!

Incredible as it appears from its monstrous absurdity, we know that there are (rather let us hope there *were*) some, who while they fully acknowledge that Religion is a good and even necessary thing, yet think it *out of place in a ship*—who consider that those who go where "the waves of the sea are mighty and rage horribly," need not be told that "the Lord who dwelleth on high is mightier"—that where temptation and evil abound peculiarly, all restraint should therefore be removed—that it is rather better that the Holiest name should be used in blasphemy than in prayer—and who have a suspicion that the partial improvement as to *oaths* and the like, which late years may have shown, is a kind of degeneracy—something like the leaving off of pigtails.

It is quite unnecessary to argue against such folly, mischievous as it is; the feeblest exertion of common sense will exhibit its worthlessness. Experience and reason contradict it, as clearly, as, were it true, *it* would contradict every word of Revelation. We have the common voice of all men with us, when we say that the Navy is one of the noblest of professions; but it is inevitably certain, that were the above monstrous opinion to be received, it must follow that it is the worst and lowest, and most degraded of all.

It is obvious that the admirable regulation first introduced for providing "vessels" of fitting beauty and costliness for the celebration of the Christian mysteries was essential to their being duly respected, if they were to be celebrated at all. If these things are rightly considered advisable *on shore,* they are quite as much so *at sea.* Indeed such outward things, important everywhere, are likely to be more so where Sailors are concerned. They take a very *simple,* and therefore a *true,* view of many things about which false reasoning has been very successfully busy among ourselves. *They* are not likely, we suspect, to think that we esteem a thing peculiarly precious because we make it outwardly

mean; and earnestly do we hope that *they* at least may never learn the sophistry which teaches that by surrounding with what outward splendour we can, what is infinitely precious, we degrade what we thus try to honour! We will even add, that the reasoning which applies to Altar *Plate*, must in consistency be extended to whatever else is considered requisite to the Altar Service in our Church, such as "linen" and other "*cloths*." And this, we repeat, with reference especially to that very peculiar class of minds which it is intended to impress. But this will probably suggest itself to those whose special business it is.

Our present Government has done much for the navy in various ways, and has well earned the gratitude of naval men.—*Hants Advertiser.*

[Since we must have wrecks, as our tables amply verify, we must find a place for the following.]

INSTRUCTIONS TO THE CREWS OF STRANDED VESSELS IN THE USE OF CAPTAIN MANBY'S APPARATUS FOR SAVING LIVES FROM SHIPWRECK.—*By Captain Pulling, R.N.*

In the first place, on a line being thrown on board by a rocket or mortar, haul upon it till you receive a tail-block with a whip rove through it.

Secondly,—Make this tail-block fast to the masthead or some part of the hull, as most convenient, and when it is fast the ship is to make signal No. 1.

Thirdly,—The party on shore will then haul off a hawser, the end of which is to be made fast close above the tail-block; when it is fast the ship is to repeat signal No. 1.

Fourthly,—Upon this warp or hawser will be a traveller, with a seat attached to it; in this one of the crew is to secure himself, and when he is ready the signal No. 1 is to be again repeated.

Fifthly,—If the vessel is beyond the range of either rocket or mortar, a buoy (the larger the better) is to be bent on to a deep sea-line, or some other small rope and thrown overboard clear of the wreck, over which a grapnel shot will be thrown from the shore, and a communication thereby obtained. You are then to act as already pointed out in first, second, third, and fourth remarks.

Sixthly,—When *tallies* are sent off with any part of the gear, the directions contained *thereon must be strictly attended to.*

Seventhly,—All vessels should be provided with a flash-pan, musket or pistol, with a flask of gunpowder, in order to make or answer night signals.

The signals which will be used on the shore to communicate with the vessel are as follow:—

No. 1, by day, a Pennant, signifies have you got hold of the line. No. 1, by night one flash.

No. 2, by day, a Flag, signifies are you ready. No. 2, by night one blue light.

No. 3, by day, a Pennant over a Flag, signifies haul the line on board. No. 3, by night, two blue lights.

The signals to be used by the vessel, as directed in the foregoing instructions, are these:—

Signal 1, by day, a man in some conspicuous part of the vessel waving his hat, denotes yes, or ready. Signal 1, by night, two flashes, to denote yes, or ready.

Signal 2, by day, a man waving a handkerchief, or flag, denotes no, or not ready. Signal 2, by night, one flash, to denote no, or not ready.

NEW BOOKS.

NARRATIVE OF THE VOYAGES AND SERVICES OF THE NEMESIS, FROM 1840 to 1843; *and of the Combined Naval and Military operations in China.* COMPLETE.

prising a Complete Account of the Colony of Hong-Kong, and Remarks on the Character and Habits of the Chinese.—From notes of Commander W. H. Hall, R.N., *with Personal Observations by W. D. Bernard, Esq.,* A.M., *Oxon; 2 vols.. 8vo.*—London: H. Colburn.

In our last we were enabled only to announce the appearance of these two volumes, with a promise which we now proceed to redeem.

China and its affairs are now occupying so prominent a position in connection with our commercial interests, that every line relating to that country will for a long time to come, be read with avidity, and the Voyage of the Nemesis following so completely as they do, the course of events as they took place in "the origin, progress, and termination of all the recent interesting occurrences" which have led to this state of things will have its full share of patronage.

The first important feature which will present itself in the perusal of these volumes, is the subject of steam navigation in iron vessels. The description of the Nemesis, her fittings, and the various contrivances of tight bulkheads, moveable keels, rudders, and jury-rudders, which will be found in the commencement of the work, are most important to the builders of iron vessels, as also is the voyage itself to China, full as it is of disasters of all kinds, all but ending in the wreck of the Nemesis. These particulars afford most useful lessons in their way which will render these volumes a useful reference on those subjects, besides the great historical events which they record.

It is impossible to contemplate the circuitous courses of the Nemesis through her different voyages, without a regret that so much time and fuel should have been expended so fruitlessly. We can see her following the trend of the African coast, on her voyage out to the Cape, until she meets with a gale off Cape Frio, in about 20° south, which drove her off to sea, and the effects of which, called for the best energies of her commander. But, experience had to be gained on the mode of making the passage, and possibly had the Nemesis attempted to follow the most approved method of doing so, her compasses of which there are ample complaints, would not have enabled her to make them, owing to their "uncertainty and discrepancy with each other."

We are however told that all this is at end,—that the question of the efficiency of the compass in Iron steam-vessels is settled, but we have not yet met with any published document, by which we can judge for ourselves, as to courses and distances made good, confirmed by astronomical observation. Assuredly it is a most important feature in the adaptation of iron vessels to Navigation, and we shall be glad to find that some other method can be substituted for the inconvenient one of suspending the compass so high as to be beyond the limits of the vessel's attraction.

The Nemesis pursues her course, "mysterious" course we might have said, to the Cape, is compelled by stress of weather, in which she would have foundered but for the seamanlike conduct of her commander, to put into English river, Delagoa Bay, touches at the Comoro Islands, and arrives at Ceylon. Onward she proceeds to Macao, and then commences that prominent part which she subsequently takes in all the proceedings of that active and successful war on the coast of China, with which our readers are long ago acquainted. The narrative of events at which the Nemesis was present is told in a manner with which the reader will be well pleased, but the work must not be looked on as "including a full and accurate account of all the operations of the war," as the proceedings of each ship would require detail which will not be found in it. But it is written with good taste and judgment, a good correct feeling pervades every part of it, and it does more to put the reader in possession of not only the great events which it relates, but the real origin and cause of the war.

We shall take opportunities hereafter of selecting some extracts, and may assure those who are any way interested in iron as a material for steamers, or in China or Chinese matters, that they will not regret the possession of the two volumes containing the narrative of "the Voyages and Services of the Nemesis."

THE NAVAL REGULATIONS.

RATES OF SHIPS.—*First Rates.*—To comprise all ships carrying 110 guns and upwards; or whose complements consist of 950 men or more.

Second Rates.—To comprise one of Her Majesty's yachts, and all ships carrying under 110 guns, and not less than 80; or whose complements are under 950 and not less than 750 men.

Third Rates.—To comprise Her Majesty's other yachts, and all such vessels as may bear the flag or pendant of any admiral superintendent or captain superintendent of one of Her Majesty's dockyards; and all ships carrying under 80 guns and not less than 70; or whose complements are under 750 and not less than 620 men.

Fourth Rates.—To comprise all ships carrying under 70 guns and not less than 50; or whose complements are under 620 and not less than 450 men.

Fifth Rates.—To comprise all ships under 50 guns and not less than 30; or whose complements are under 450 and not less than 300 men.

Sixth Rates.—To consist of all ships carrying a captain.

Denominations and Ranks.—The officers of the navy are to be divided into two branches—viz., a military branch and a civil branch; and to be styled, respectively, officers, subordinate officers, and warrant officers.

The military branch is to include flag officers, commodores, captains, commanders, lieutenants, masters of the fleet, masters, mates, second masters, midshipmen, masters' assistants, naval cadets, gunners, boatswains, and carpenters.

The civil branch will comprise the director general of the medical department, who is to rank with, but after, commodores.

Medical inspectors of hospitals and fleets to rank with, but after, captains under three years' seniority.

Secretaries to flag officers commanding in chief, deputy medical inspectors of hospitals and fleets, both of whom are to rank with, but after commanders.

Chaplains, secretaries to junior flag officers and commodores of the first class, surgeons, paymasters, and pursers, and naval instructors, to rank with, but after, lieutenants and masters.

Assistant Surgeons to rank with, but after, mates.

Clerks to rank with, but after, masters' assistants.

Clerks' assistants to rank with, but after, cadets.

The officers of the two branches are to be appointed as follows:—

By commission (military).—Flag officers, commodores, captains, commanders, lieutenants, masters of the fleet, masters, mates, and second masters.

By commission (civil).—Medical inspectors of hospitals and fleets, secretaries, deputy medical inspectors of hospitals and fleets, chaplains, surgeons, paymasters, pursers, and assistant surgeons.

By order.—Naval instructors, midshipmen, masters' assistants, clerks, naval cadets, and clerks' assistants.

By warrant.—Gunners, boatswains, carpenters, and engineers.

NAVAL INTELLIGENCE.

(From the Plymouth Herald.)

DEVONPORT, May 16.—The *Comet* steamer, Lieut. J. B. Emery, Com. sailed on the 9th for Woolwich, to have her defects made good. *Dee* steamer, Mr. Thomas Driver, Master, sailed on Saturday with stores for the squadron at Cork. *Netly* tender arrived on Saturday from Portsmouth, with supernumeraries. The *Snipe* cutter, Lieutenant George Raymond, commanding, sailed on Tuesday for Cork. *Confiance* steamer was undocked on Tuesday, having had her defects repaired. *Penguin* packet, 6, Lieut. Walter Leslie, Com. sailed yesterday for Falmouth, to take out the next mail to Rio Janerio. The crew of the *Caledonia*, 120, Capt. A. Milne, were paid wages this day, and expects orders for Spithead in a days or two.

The breakwater experiment at Dover, of Capt. Groves, R.N., made by that Officer, with the assistance of the Admiralty, has been or is to be terminated by the materials being brought on shore, and disposed of as old iron.

The foundation stone of the sea-wall in the Dockyard was laid Tuesday by Captain Burgman, Royal Engineers, at a depth of 40 feet below, low-water-mark. Rumour states that a basin is to be formed within it, for the accommodation of ten sail of the line; we can scarcely credit it, as the harbour is a complete basin itself, and the expense would be immense. A short time since a shipwright, employed on board the *Superb*, 80, fitting as an advance ship, fell into her hold, a depth of between 40 and 50 feet, and wonderful to relate, escaped with only a contusion in one of his thighs.

In Harbour—*San Josef*, *America*, and *Confiance*.

In Dock, repairing—*Kent*, *Actæon*, *Grecian*, and *Ranger*.

In the Sound—*Caledonia*.

Sheerness, May 16.—The *Vernon*, 50, Capt. W. Walpole, arrived on Saturday, and will be paid off on Tuesday. *Camperdown*, 104, flag ship, Capt. W. F. Martin, is still short handed, but in other respects ready for sea. She will leave it is supposed in about a week or ten days. *Cygnet*, 6, will leave the Basin in a few days. *Vulture*, first class steamer, is ready for commission.

In Harbour—*Camperdown*, *Ocean*, *Africaine*, *Vernon* and *Raven*.

In Basin—*Monarch*, *Vulture*, *Chichester*, *Crocodile*, and *Cygnet*.

In Dock—*Boscawen*, *Æolus*, and *Amazon*.

Portsmouth.—On the 16th May the *St. Vincent* went out of Harbour to Spithead and will wait the arrival of the *Camperdown*, 110, Capt. Martin, from Sheerness, when both will proceed to the Westward to join the *Caledonia*, 120, in Plymouth Sound. The *St. Vincent* is taking in lower-deck guns, powder, shot, shells and provisions. *Rattlesnake*, troop ship, Mr. Brown, Master, was towed into the Harbour on Thursday afternoon, to be dismantled. She has been very sickly during her absence from England, and has lost several invalids on the homeward passage. When she left the Cape of Good Hope (5th March,) Rear Admiral Percy, C. B. was about to make a cruise in the *Winchester* frigate, for several weeks. The *Wanderer*, 18, Com. Seymour, and *Sapphire* troop ship, Mr. Fittock, may be expected shortly from China; but the Cornwallis, 72, with Vice Admiral Sir W. Parker, will not be home before July. *Prometheus* is now fitting as a war steamer for the Coast of Africa; she has had her decks strengthened to bear the ordnance of a second class steamer. She will carry a 68-pounder medium gun of 84 cwt, as a shifting pivot gun, and four 32-pounder medium guns of 25 cwt. each as broadside guns. *Vindictive*, 50, Capt. Nicholas, may be looked for in England in the early part of June, according to a letter of the 20th Feb. *Britannia*, 120, at this port, is to take the *St. Vincent's* moorings, for the next flag.

Plymouth.—The *Queen*, 110, Capt. Rich; *Indus*, 78, Capt. Sir J. Stirling, knt.; *Pearl* 20, Com. Stopford; and *Rattlesnake* troop ship, commanded by Mr. Brown, Master, are hourly expected at this port; the latter from China, having on board naval and military invalids, and a portion of the 55th Regiment. *Nautilus*, transport, Lieut. W. C. Saunders, Agent, arrived last evening from the Mediterranean, she brings about 150 tons of returned ordnance and victualling stores, and about 200 passengers, chiefly soldiers of the 48th Regt. from Malta.

Malta, April 28.—Her Majesty's ship *Queen* proceeded to England yesterday. She did not wait for the return of the *Warspite* from Athens, with the remainder of the marbles collected at Xanthus. The *Snake* had reached Smyrna from a cruise. *Savage* had left Athens for Chalas. *Orestes* and *L'Aigle* had left Corfu for Zante, where they had arrived. *Belvidera* is going to Naples from Tunis, and will return to Malta at the end of May.

Disposition of the Fleet.—Malta harbour—*Formidable*, 84, bearing the flag of Vice-Admiral Sir E. W. C. Owen, K.C.B. and G.C.H.; Captain G. F. Rich; *Ceylon*, 6, bearing the flag of the Rear-Admiral Sir L. Curtis, Lieut. R. Curtis, Steamers—*Medea*, Com. Warren; *Geyser*, Com. Carpenter; *Devastation*, Com. Kitchen; *Acheron*, Lieut. B. Aplin.

Gibraltar—*Locust* steamer, 3, Lieut. J. Lunn.

Coast of Spain—*Scout*, 18, the Hon. J. R. Drummond.

Piræus—*Savage* Lieut. Bowker; *Virago*, Com. G. G. Otway.

Constantinople—*Hecla* steamer, Com. J. Duffill.

Corfu—*L'Aigle* 24, Capt. the Right Hon. Lord Clarence Paget; *Orestes*, Com. Cannon.

Tunis—*Belvidera*, Captain the Hon. G. Grey.

Smyrna—*Snake*, 16, the Hon. H. B. Devereux.

Vessels on route to different Ports.—To the Islands, *Beacon*, Com. Graves; to Macri, *Warspite*, 50, Capt. P. W. P. Wallis; to Genoa, *Vesuvius* Com. Ommanney; to Gibraltar, *Indus*, Sir J. Sterling, and *Alecto*; to Marseilles, *Polyphemus*, Lieut.-Com. T. Spark.

Wrecks of British Shipping.

(Continued from p. 318.—cs. crew saved—d. drowned.)

VESSELS' NAMES.		BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Gannet	167	———	Reed	———	———	NewZealand	Aug. 29, cs
Georgina		———	———	Liverpool	Arica	Blackwter B	April
Gov. Hobson		Sydney	Scanlan	———	———	Table C.N Z	Aug, 17, cd
Harriet	170	———	Bunker	Whaler	burnt at	Strong I.	———
Hilda M		———	Anderson	Hull	Stockholm	Skagen R.	April 7, cs
H. Mathie		———	Sparkes	Calcutta	———	Mauritius	Jan. 6, cs
I. Dennistoun		———	Young	Liverpool	Mobile	C St Antonia	March
Intrepid		———	Stewart	Liverpool	Singapore	foundered	Jan. 31, cs
Jane	175	Greenock	———	Newport	Barcelona	foundered	April 5, cs
Jessie Richie		Liverpool	McLachlin	Liverpool	Havanna	I. Pines	Mar. 14, cs
John Blake		Exeter	Whiteway	———	———	Colorados	Mar. 9, cs
Lunar		SydneyNSW	Barker	———	———	Middle I. NZ	Dec. cs
Malay		———	Shaw	Moulmein	———	Mauritius	Jan. 6, cs
Marian	180	———	Rouse	Calcutta	———	Mauritius	Jan. 6, cs
Palestine		———	———	Newcastle	Bombay	by fire	Feb. 3. cs
Rebecca		———	———	Batavia	P. Philip	King I.	Sept. 30
Sir W. Scott		———	———	LaGuayra	———	Morant Cays	Mar. 24, cs
Spraycombe	184	———	Cox	Bridgewater	Swansea	Caswell B.	April 16, cs

173—The master and twelve of the crew arrived the 12th at Cay West. Mate and three more of the crew left in boat and have not since been heard of.

177—This is so remarkable an instance of an ABANDONED VESSEL being the means of saving the crew of a vessel abandoned, that we think the account of it worth preserving as it stands in the columns of the SHIPPING and MERCANTILE GAZETTE of the 22nd of April.

DARTMOUTH—April 21: 20—Wind S.E., to N.E., fine.

The Two Friends, of Jersey, supposed from Newport, has been brought in here, having been found abandoned on the Colorados Reef, near Cape Antonio, on the 9th March, by Mr. John Whiteway and crew, of the brig John Blake, of Exeter, which vessel was abandoned by them on the 9th March, at noon, having then 12 feet water in the hold, and no chance of putting her off the Colorados. She was bound from Savanilla to Cork for orders, with a cargo of fustic wood, &c. Part of the cargo (coals) was thrown overboard from the Two Friends by Mr. Whiteway's crew, when they got her off the reef and brought her to this port. As the boats were gone, also the compasses and clothes of the crew, it is to be hoped all hands are saved. The Two Friends experienced two heavy gales homeward, but the crew report her tight; she apparently has sustained little or no damage.

Promotions and Appointments.

(From the Naval and Military Gazette.)

Downing Street, May 3.—The Queen has been pleased to appoint C. Fitzgerald, Esq., Commander in the Royal Navy, to be Governor and Commander-in-Chief in and over Her Majesty's settlements in the Gambia.

Whitehall, May 9.—The Queen has been pleased to direct letters patent to be passed under the Great seal, constituting and appointing Robert Maunsell, Esq., Companion of the Most Honourable Order of the Bath, and Captain in the Royal Navy, one of the Commissioners of Greenwich Hospital, in the room of Edward H. Locker, Esq., resigned.

Whitehall, May 13.—The Queen has been pleased to direct letters patent to be passed under the Great Seal of the United Kingdom, constituting and appointing the Right Hon. Thomas Earl of Haddington; the Right Hon. Sir George Cockburn, G.C.B., Admiral of the Red Squadron of Her Majesty's Fleet; Sir William Hall Gage, Knight, Vice Admiral of the Red Squadron of Her Majesty's Fleet; William Bowles, Esq., C.B., Rear Admiral of the Blue Squadron of Her Majesty's Fleet; the Hon. W. Gordon, Captain in Her Majesty's Navy; and the Right Hon. Henry Thomas Lowry Corry, to be Her Majesty's Commissioners for executing the office of High Admiral of the United Kingdom of Great Britain and Ireland, and the dominions, islands, and territories thereunto belonging.

PROMOTIONS.

RETIRED CAPTAIN—W. N. Tonge.

RETIRED COMMANDERS—G. Thomas, W. S. Oliver, J. White, E. Rowen, C. Tilley, G. Welsh, J. Nicolls, and R. Trotter.

COMMANDERS—A. Vyner, F. Briggs.

LIEUTENANTS—G. Baker, A. F. Webster, W. Peel.

MATES—C. F. De Voux and W. Peel.

SURGEONS—R. J. Scott and A. Woodcock.

PAYMASTERS AND PURSERS—W. H. Reeves, G. A. Lance, C. Fielden, W. H. Wiseman.

APPOINTMENTS.

REAR ADMIRAL—Sir. H. Pigot, C.B., K.C.H. (1837) to command on the coast of Ireland.

CAPTAIN—H. Eden (1827) to *Collingwood*.

COMMANDERS—H. Broadhead (1841) to *Collingwood*—F. B. Montresor (1843) F. Cannon (1842) and P. B. Stewart (1841) to study steam on board the *Sulphur*, at Woolwich—C. B. Hamilton (1844) to *Frolic*—H. Layton (1825) to *Cygnet*—J. Hay (1841) to *Prometheus*.

LIEUTENANTS—G. Johnston (1841) to *Stromboli*—A. F. Webster (1844) to *Cornwallis*—J. P. Palmer (1842), R. A. Stewart (1839) to *Cygnet*—D. R. B. Mapleton (1837), Hon. F. Curzon (1844) to *Sydenham*—W. Macfarline to be agent for Mails—J. Imrie (1811) to be agent on board the Java transport—Lord F. H Kerr (1840) to *Winchester*—B. J. Loveless (1811) to Greenwich Hospital—W. G. Deane (1843) to *Hecate*—J. F. C. Hamilton (1841), H. Oakley (1843) to *America*—G. H. Harper to *Racer*—J. F. Warre (1841) to *Alfred*—F. Willoughby (1843) to *Daphne*—F. T. B. Hankey (1833), C. J. Balfour (1838), J. O. Bathurst (1838), P. Somerville (1841) G. E. K. Gore (1843) to *Collingwood*—W. H Stewart (1842) to *Ringdove*—E. P. B. Von Donop (1838) to *Illustrious*—J. Compton (1838) to *St. Vincent*—J. B. Hooystra (1841) to *Hydra*—O. Cumberland (1841) to *Albert*—T. Freer (1821) to *Madagascar*—R. J. D. Waddilove (1843) to *Dublin*—F. S. M'Gregor (1838), J. Strettell (1841) to *Prometheus*—R. M. Sandom (1843) to *Excellent*.

MASTERS—C. T. Tucker to *America*—J. Penn to *Collingwood*—M. S. S. Burney to *Cygnet*.

MATES—H. T. N. Cheshyre to *Sydenham*—G. M. Jackson to *St. Vincent*—H. De Lisle to *Alfred*—C. F. De Voux to *Excellent*—W. Peel to *Winchester*—J. Cartwright, Hon. F. Walpole, H. Grant to *Collingwood*—R. A. Buchanan to *America*—S. Lilburn to *Prometheus*—G. M. Smith to *Cyclops*—H. D. Blanckley to *Flamer*—O. M. C. Read to *Skylark*.

SURGEONS—A. Cross to *Imaum*—F. Mansell to *Collingwood*—J. Watson of *Imaum*, to be Medical Storekeeper at Jamaica Hospital, *v.* Middleton appointed to Hawlbowline Hospital, Cove—F. W. Le Grand to *Fox*—T. E. King, MD. to be surgeon-superintendent in *Angelina* convict ship—R. J. Scott to *Royal William*—R. M'Crae to *Cygnet*—J. D. Tweeddale to *Prometheus*.

SECOND MASTERS—G. S. Hall to *Sydenham*—J. Symons and J. S. Hall to *Caledonia*—W. Draper and J. Wallis to *Lynx*—W. K. Freeman to *Volage*—H. A. Moriarty to *Formidable*—C. Parsons to *Fox*—J. S. Benstead to *Redwing*—T. Hart to *Prometheus*.

ASSISTANT SURGEONS—J. Gray, A. E. Mackay to Haslar Hospital—S. Livesay to *Sydenham*—A. Robertson to *Alecto*—J. Speer and Jewers to *Collingwood*—G.

Ball to *San Josef*—A. Coates to *Snipe*—R. Clarke to *Caledonia*—R. P. Chapman to *Prometheus*.

MIDSHIPMEN—De Horsey, Moreton, Riley, Dawson, Urmston, Morgan, Mason and Lambert to *Collingwood*.

NAVAL CADETS—L. C. Hamilton and J. Goodenough to *Collingwood*.

PAYMASTERS and PURSERS—J. Barrat to *Prometheus*—C. H. Jones to *Cygnet*—A. Dawson to *Collingwood*.

CHAPLAINS—J. Falls to *Iris*.

CLERKS—H. Parsons to *Camperdown* M. Crouch to *Ocean*—Wiles and F. B. Marshall to *Collingwood*—C. D. Gourd to *William and Mary* yacht—R. Lowcay to *Bonetta*—J. T. Rutter to *Sydenham*—W. Parminter to *Collingwood*—T. W. S. Neame to *Cygnet*.

COAST GUARD.

Appointments—Com. J. Hills to be Inspecting Commander at Littlehampton—Lieut. H. Probyn and Lieut. Henneh to command stations.

Removal.—Lieut. R. Taylor to Chichester Harbour.

The Officers of the *Formidable* and *Queen* exchanged ships on Vice Admiral Sir E. Owen shifting his flag to the former.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

April 16th, at Winster, the lady of Lieut. H. Norman, R.N., of a daughter.

April 18th, at Rumleigh, the lady of Capt. W. K. Stevens, R.N., of a son.

April 29th, at Cowes, the wife of Mr. G. Johnson master R.N., of a son.

Marriages.

May 2nd, at Fulham, E. H. Palmer, Esq., to Jessie Fanny, fourth daughter of Capt. Greville, R.N.

May 1st, at Stillington near York, G. J. Huband, Esq., to Mary Ann, youngest daughter of Rear Adml. Croft, of that place.

April 25th, at St. Mary's Bryanstone Square, F. E. Voyle, Esq., to Caroline Sarah youngest daughter of Rear Adml. Noble.

April 23rd, at St. Mary's Bryanstone Square, Com. C. C. Grey, R.N., to Caroline daughter of the late Major T. Macan.

April 18th, at Aldingbourne, Com. H. Schomberg, to Sarah eldest daughter of the Rev. W. Stevens Bayton.

May 9th, at St. John's Paddington, Capt. Sir Spencer Vassal, R.N., K.H., to Letitia, only daughter of the late E. B. Napier, Esq.

Deaths.

April 21st, at Leamington, Vice Adm. Sir Jahleel Brenton, K.C.B.

April 28th, at Bath, Rear Admiral F. W. Fane.

May 5th, at Plymouth, Rear Admiral William Furlong Wise, C.B.

May 15th, at Byland Hall, Norfolk, Rear Admiral Hon. F. P. Irby.

April 22nd at Tottenham, T. Pownell, Esq., R.N.

April 23rd, at Mutley near Plymouth, H. G. Page, Esq., Surgeon, R.N.

April 27th, in London, John Allen Wright, Esq., Lieut. R.N.

April 28th, at Greenwich Hospital, Lieut. Nicholas Tucker, R.N.

H.M. Steam-Vessel Shearwater,—Largs N.B., May 18.—A deplorable event occurred yesterday afternoon, whereby two enterprising young Officers, belonging to this vessel, were suddenly drowned. Mr. E. Cayley, Midshipman, and Mr. W. N. Jewell, Master's Assistant, were sailing in a boat between Largs and Cumbrays, when, in the act of jibing, the boat was upset, and sunk immediately in 25 fathoms. H.M. Revenue st. v. *Vulcan*, was in the offing, and proceeded immediately to the spot, as also the boats of the *Shearwater*; but although only a few minutes elapsed they were both gone, having been probably entangled in the boat's rigging. Their caps were picked up, and every effort will be made for the recovery of their bodies. This sad event has deprived the Service of two young gentlemen of great promise. They were deservedly esteemed and beloved by their Officers and messmates; and the anxiety as to their fate, evinced by the inhabitants of Largs, was a test of the respect they were held in on shore. Mr. Cayley was son of Mr. Cayley, M P. of North Riding, Yorkshire; and Mr. Jewell, son of Lieut. W. N. Jewell, R.N.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st April, to the 20th May 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Su.	30·26	30·24	57	65	52	66	NW	W	1	1	bcm	bcm
22	M.	30·15	30·15	55	65	45	67	SW	W	2	2	b	bc
23	Tu.	30·26	30·23	51	65	46	66	N	W	2	1	b	b
24	W.	30·11	30·16	53	63	42	64	NW	NW	2	2	bcm	bcm
25	Th.	30·23	30·20	50	67	39	68	NE	SE	2	2	b	b
26	F.	30·04	30·04	53	74	41	75	SE	N	1	1	b	bc
27	S.	30·24	30·28	50	62	45	63	NE	NE	4	4	bcp (1	b
28	Su.	30·36	30·38	49	64	38	65	NW	NW	1	3	bm	bcm
29	M.	30·32	30·30	50	56	37	57	E	E	5	5	bc	b
30	Tu.	30·27	30·33	53	63	40	64	E	E	4	4	b	b
1	W.	30·40	30·43	53	64	41	65	NE	NE	3	3	b	b
2	Th.	30·45	30·45	53	67	40	68	NE	E	3	3	b	b
3	F.	30·24	30·22	54	62	41	63	NE	NE	5	5	bc	bc
4	S.	30·16	30·11	52	59	48	60	NE	NE	4	4	op (2)	o
5	Su.	30·08	30·00	51	71	48	72	N	N	2	2	o	bcm
6	M.	29·90	29·86	56	70	46	72	N	N	2	3	b	bc
7	Tu.	29·82	29·86	60	69	45	70	NW	N	2	2	bc	bcp (4
8	W.	29·98	29·01	56	67	47	68	NW	N	3	2	bcm	bcm
9	Th.	30·01	30·03	59	73	50	74	S	SW	3	3	bcm	bcm
10	F.	29·98	30·96	56	60	51	61	NW	NW	2	4	op (2	bc
11	S.	30·96	29·02	53	61	46	62	NE	N	3	4	b	bc
12	Su.	29·20	30·24	57	65	51	67	N	N	2	3	o	bc
13	M.	30·36	30·38	55	71	44	72	N	NE	2	2	b	bc
14	T.	30·37	30·35	60	72	46	74	N	N	2	2	b	bc
15	W.	30·38	30·36	54	58	44	59	NE	NE	4	6	bc	qbc
16	Th.	30·24	30·12	53	61	44	62	N	N	3	3	bc	bcm
17	F.	29·90	29·94	56	47	46	57	N	N	4	6	bc	qop (3
18	S.	29·91	29·92	44	52	33	53	N	NE	6	6	qbc	qbcp (3)
19	Su.	29·95	29·98	51	53	39	54	NE	NE	6	6	qbcm	qbcm
20	M.	30·00	30·01	52	60	43	61	NE	NE	6	6	qbc	qbc

April 1844.—Mean height of the Barometer=30·142 inches; Mean temperature = 52·6 degrees; depth of rain fallen only 0·38 inches; A very dry month.

TO OUR FRIENDS AND CORRESPONDENTS.

The superabundance of matter on our hands has induced us, with a view of meeting the wishes of our correspondents, to increase our present number beyond its usual limits. This will, therefore, account for its running to so many pages in excess of the rest. With all our desire still to complete the papers on hand, and to insert much information that we have omitted, we are yet unable to do so, and can, therefore, only endeavour to preserve the most important.

Mr. Smith's communication came too late to appear in our present, but shall be dealt with in our next number; in which, also, we hope to finish the Cornwallis's Voyage, that of the Thunderer, and to resume our West India tales of the Leeward Station, too long neglected, as well as to keep pace with other current matters.

Mr. Cotter's letter on the Whale Fishery, and Mr. Bartlett's letter from Santa Cruz, we have been compelled to reserve for our next.

Erratum.—Page 348, line 24, *for* "drawing" *read* "driving."

Pages 231 and 232 given at the end of our last, are to be substituted for those in the April number.

Hunt, Printer, 3, New Church Street, Edgware Road.

The Bashee Islands.

On referring to the chart of the Bashee Islands situated in the channel between Formosa and the Phillippines, the scanty knowledge we have of them is at once apparent; no survey has hitherto been made of them, and we find them laid down from the remarks and observations of passing Navigators. The channel, however, in which they are, forms the high road to Canton from the eastward; and since it has been ascertained, that the passage from Canton to the northern ports of China, should be made outside the island of Formosa, this channel derives additional importance, from being frequented by a great and increasing trade. We are, therefore, glad to find that it is to undergo the searching investigation of Sir Edward Belcher, commanding H.M. ship *Samarang*, and while we are waiting the result of that officer's labours, the following information concerning them, which we have just received from him, cannot fail being useful to our seamen.

In the approach to this group, care must be taken to avoid a patch which frequently breaks, situated three-quarters of a mile from the northern end of Sabtan.

The islands composing this group (or Batanes) are as follow:—Batan, Sabtan, Ytbayat, Ibugos, Dequey, Diego, (or High Island), Mabudis, Siayan, and Cresta Gallo.

The space between the islands of Sabtan and Ibugos, affords but indifferent anchorage, the bottom being rocky with sandy patches between, but Dampier remained here some weeks.

There are no facilities for watering, the stream* entering at the coral beach, at least half a cable from the spot where boats could float.

The *Samarang* beat up and took up this anchorage in the first instance. We then moved to the Bay of San Domingo in the island of Batan, which affords fair clean bottom, fine coral sand, the best berth being with the Convent barely open, (when moored) of the northern point of the bay, in 13 fathoms. This, however, is not very secure with a "Norther", although I believe that the holding ground is good. It can only be resorted to in the north-east monsoon.

Supplies of beef, vegetables, and stock are plentiful as well as cheap, but water, although plentiful, and of excellent quality, is not easily procured, owing to the reefs preventing the boats from getting in without danger. The Authorities (Alcalde and Priests,) recommend San Carlos situated about two miles to the westward. The anchorage off is exposed, and watering could only be effected in fine weather. The passage through the reef is however perfectly safe for the largest boats, which land on a sandy beach. This channel has been cut through the reefs to admit schooners of 50 tons, which are generally hauled up when they arrive from Manilla, with the first of the south-west monsoon.

The next anchorage is that of San Vicente, improperly termed the Bay of Ivanna.† San Vicente is the fort of Ivanna, or landing place

* This stream is near a small rocky islet on the parallel of the south extreme of Ibugos.

† Vide Plan Book Admiralty.

for that Peublo. The spot adapted for anchorage is a very confined space, with sandy bottom, close to the reefs, and must be quitted the moment a northerly wind threatens. I am informed that several vessels have been driven off, and unable to purchase their anchors, with the length of cable out, have cut away, or slipped anchor and cable. This *Plan** therefore, may be considered as the *cause of much mischief*, as tempting vessels to resort to a very bad anchorage.

During the south-west monsoon, other shelter must be looked for, and probably will be found under the north-east part of the Island Sabtan. It has not yet been sounded.

On Batan, two very deep bays appear to offer shelter on the north-east side of the island, the northern (and best) Souson; the other Mananioy; but both contain many rocks. They have not been sounded.

During the north-east monsoon strong winds prevail amongst these islands: The currents are occasionally strong between the islands of Batan and those northerly; the flood of Batan setting to the south-west, and the ebb to north-east.

The following prices were agreed upon by the Alcalde and Priests, as affording them fair remuneration, and to which they guaranteed to conform in future.

Bullocks, 1st class, 10 dol.; 2nd class, 8 dol.; 3rd class, 4 dol.; Goats, 1st class, 1 dol., 2nd cl. 75 cents, 3rd cl. 3·37·5 cents; Fowls (doz.) 1st class 2 dol., 2nd cl. 1 dol.; Pigs 1st class 6 dol., 2nd cl. 3 dol., 3rd cl. 75 cents to 50 and 25; Eggs (per 100) 1 dol.

Vegetables—Yams (per 100) 1 dol. 50 cents; Ducais 75 cents; Sweet Potatoes, 50 cents; Onions, (per cwt.) 5 dol.; Pumpkins (per 100) 3 dol.; Cocos, (per 100) 25 cents; Cocoa Nuts (per doz.) 125 cents.

The following are the positions fixed on these islands:—Ibugos or Bashee Island, north-eastern angle, lat. 20° 19′ 30″ N., long. 121° 48′ 0″ E., Variation 00′ 30″ W. San Domingo Casa Real lat. 20° 27′ 26″ N., long. 121° 57′ 6″ E., Variation 0° 0′ 30″ W.

EDWARD BELCHER,
Captain.

THE COAST OF AFRICA FROM THE CAPE COLONY TO ICHABOE ISLAND.

By Captain Morell.

(Continued from p 374.)

October 22nd.—On Wednesday, the 22nd of October, we anchored on the east side of Mercury Island, in four fathoms of water, about two cables' length from the island, which is situated in lat. 25° 42′ S., long. 14° 58′ E. It is one mile in circumference, of an oblong shape, lying north and south, and is three-quarters of a mile north from the south-west point of Spencer's Bay, and one mile and a half west from the north-east point of the same bay. Both passages are easy, and free

* Admiralty Plan.

from dangers; and the best anchorage is on the east side of the island, about one hundred and fifty fathoms from its shores, in five fathoms of water, sand and clay bottom. I would not advise ships to anchor to the south side of the bay, as a heavy westerly swell heaves into it, on the full and change of the moon; but let them anchor close under the island, and they will lie perfectly safe, in smooth water.

The south point of Spencer's Bay presents several high peaked rocks, nearly six hundred feet perpendicular, at the waters' edge. Whales frequent this bay in considerable numbers, in the months of July and August. Seal of the fur kind also frequent the shores of Mercury Island, while its summit is thickly inhabited by penguins and gannets, during their laying and incubation season. The shores and surface of the island, present many specimens of volcanic productions, as do also those of the continent in this vicinity, extending some distance into the country.

There is a Hottentot village about forty miles on an east-by-south course from the head of the bay, containing about two hundred and fifty inhabitants, and situated in a fertile valley, watered by several springs of excellent fresh water. There are also four refreshing springs between the village and the bay. The interior of the country abounds in cattle, sheep, deer, bucks, wolves, gray foxes, elephants, and ostriches, in greater numbers than it does farther south; which may be had for any price you please to give, in the way of barter; for money would be of no more use to them than an equal weight of sand would be to us. Offer them such articles as their circumstances require, and they will trade in the most liberal and honest manner.

I am aware that most people have imbibed the mistaken idea that these natives are treacherous, and cruel, and bloodthirsty, and every thing that is bad. It is no such thing. I make the assertion on personal experience and practical knowledge. There is no more danger in travelling two or three hundred miles in the interior of this country for the purpose of purchasing cargoes, than there is in travelling among our own Indians in the state of New-York; provided you take no temptations with you, and no other arms than a musket. Whatever you purchase of the natives is sold in good faith, to be paid for according to contract on the delivery of the articles at the beach, and not before. Under this arrangement, they could not defraud you, were they so disposed; and were there no other safeguard for your person, the prospect of this payment would be amply sufficient. But their natural dispositions are friendly and humane; and if you treat them with kindness, they will repay your favours more than ten to one. When they deliver the cattle and other articles at the beach, give them the articles in return for which they stipulated, and they are satisfied; but I would recommend a little extension of courtesy on these occasions, by presenting their chiefs a few tasteful trifles which may attract their attention. Whatever you bestow in this way, will not be thrown away, but returned to you sevenfold in some other shape, or on some other occasion.

While on this subject, with a special reference to the purchase of cattle and the jerking of beef, it may be well to mention that there are many salt-springs in the valleys at the head of Spencer's Bay, where

salt might be manufactured in immense quantities, if properly attended to. But perhaps it would be full as cheap to bring the article from the Cape Verd Islands, to jerk your beef and cure your hides; which is necessary to prevent the invasion of bugs and other insects.

November 6th.—After taking about a thousand fur-seal skins from Mercury Island, and examining the interior of the country at a great distance inland, we got under way, on Thursday, the 6th of November, and steered to the north, for Bird Island, where we arrived on the following day.

This little island, which is not more than the fourth of a mile in circumference, is in lat. 24° 38′ S., long. 14° 22′ E., and about three leagues from the mainland. A reef of rocks runs off from it, in a south-west direction, about five miles, on which the sea breaks at times very heavy. A vast number of right whales frequent this reef in the months of July and August; and a ship may lie at anchor on the north side of the island, in ten fathoms of water, all the whaling season, in perfect safety, if she has chain cables. This island is resorted to by seal, gannets, and penguins; and we took here the skins of fourteen hundred fur-seal at one time, although the landing was very bad. The passage between the island and the continent is about nine miles in width, free from hidden dangers, with a depth of water from twenty to ten fathoms, near the mainland.

The Alligator Rock, as laid down on the chart, I could not find, after two days spent in the search. I therefore conclude that there is no such reef, but that Bird Island has been seen in a haze, and mistaken for a danger which does not actually exist. The extreme haziness of the weather peculiar to this coast might very easily have deceived Captain Wood, of his Britannic Majesty's ship Garland, when he thought he had discovered a reef here, in 1798; for I have frequently been running along this coast, not more than one league from the land, when the sand-hills which line this part of the coast have appeared to be five or six leagues from the vessel.

I have no doubt that Bird Island is the effect of some mighty convulsion of nature, which has piled together in an irregular form loose blocks of stone, basalt, lava, and other volcanic productions. The waters around its shores, however, abound with many kinds of excellent scale-fish, which may be caught with hook and line in great quantities. A few turtle, also, may be found on a small sandy beach on the east side of the island.

November 16th.—On Sunday, the 16th of November, we left Bird Island, and continued our examination of the coast to the northward, with a gentle breeze from south-by-west, and fair weather.

On Tuesday, the 18th, we arrived at the mouth of what is called Sandwich Harbour, said to have three fathoms of water in its channel of entrance. Although we found only eleven feet at high water in this channel, I have no doubt there was a time, some years back, when its depth was full three fathoms, and that it has been filled up by drifts of sand, the movements of which along this coast forcibly reminded me of the snow-drifts of my native country; every fresh southerly wind forming new sand hills, exactly as new snow-banks are formed at home, by a fine, clear, cold north-wester.

This lagoon runs into the southward, about two leagues, with seven, five, three, and two fathoms, nearly all over it. It is formed on the east by a high white bluff sand hill; and on the west by a low sandy peninsula nearly level with the sea; with shoal water on the seaboard side for more than a mile to seaward. The entrance of the lagoon is very narrow, being not more than a quarter of a mile wide, and formed by two low sandy points, situated in lat. 23° 35′ S., long. 14° 28′ E. Variation per azimuth in 1828, 23° 15′ westerly.

Perhaps there is not a finer place on the whole coast than this for taking fish with the seines. Many different kinds of fish resort to this lagoon; one of which bears a strong resemblance to our "streaked bass;" and is as fat and delicate-flavoured fish as our salmon. There are many other sorts, equally good, but of a smaller size. Many cargoes of fish might be taken from this lagoon in a short time; and they would sell for a good price at St. Helena, Cape of Good Hope, Isle of France, or the Isle of Bourbon. Green turtle also visit the sandy beaches for the usual purposes.

November 22nd.—We left Ponta dos Ilhos, or Sandwich Harbour, on Thursday, the 20th, and steered to the northward, examining the coast in search of fur-seal; and on Saturday, the 22nd, we arrived at Walwich Bay, the west point of which is very low, and lies in latitude 22° 53′ S., long. 14° 24′ E. The entrance to the bay is one league broad, running to the south two leagues; one league and a half of which is navigable, and the depth of water in going in is from twelve fathoms to three, mud and clay bottom near the head of the bay.

The east side of this bay is formed by moderately elevated sandhills, near the sea shore, and the west side is formed by a very low sandy peninsula, not more than fifteen feet above the level of the sea at any place. The isthmus is very narrow, it being not more than twenty rods from the head of the bay to the seashore. The peninsula, however, is from one to three miles in width. In entering this bay, it is necessary to give the west point a good berth, of nearly half a mile, on account of a sand-bank that runs off from it, in a N.N.E. direction about a quarter of a mile, on which there is only six feet of water at low tide. After doubling this point, in advancing up the bay, it is proper to give the western shore a berth of one-fourth of a mile; taking care not to approach to it any nearer, as the water becomes shallow very suddenly, from five fathoms to two, and even to four feet, at low water. This is a mud bank, which stretches all along the western and southern shore of this bay; but the eastern shore is bold one cable's length from the beach, nearly to the head of the bay.

This bay and its vicinity, in the months of August and September, are visited by great numbers of right whales, which resort thither for the purpose of bringing forth their young. Fish also, of various kinds, and in great abundance, may be caught here with a seine; but it is difficult to haul the seine on shore in any part of the bay excepting the eastern shore, on account of the mud flats. Ships visiting this bay for the purpose of taking whales in the months before named, should anchor about half a mile within the bay, under the western shore, in five fathoms of water, muddy bottom. In this situation they will be enabled to see whales from the mast-head, outside of the bay beyond

the peninsula; and at the same time lie in safety, as northerly winds never blow here more than a royal breeze, and that for a few hours only. They will also gain much time, and save much labour, in getting the whales alongside the ship; as the wind blows nearly all the time from the south; and often, in the afternoon, a single-reef breeze. But it is generally calm at night, and in the fore-part of the day. The water is entirely smooth all over the bay, and consequently it is a safe as well as a spacious harbour at any season of the year.

The interior of the country to the eastward of this bay presents a dreary range of desert sandy mountains and valleys, entirely destitute of soil, or vegetation of any kind, for twenty or twenty-five miles inland, with the exception of a few valleys that lie to the E.S.E. and south-east of the head of the bay, in which are a few Hottentot villages, with small herds of cattle and sheep, that feed on such coarse grass and shrubbery as they can pick up.

About three miles from the south-east part of the bay, on a S.E.b.F. course, is a small village, where fresh water may be had from many springs in the valley. This water possesses a peculiar flavour, not unlike sassafras tea, but it is not in the least brackish. The village contains about two hundred and fifty inhabitants, who often visit the bay for the purpose of fishing. I have frequently had them on board the vessel, and have purchased from them cattle and sheep, which were in fine order. I uniformly found them to be a very friendly, harmless, inoffensive people, but very indolent and filthy, and somewhat given to thieving.

Their tents or wigwams resemble those I have seen near the Strait of Magellan, and are sufficiently capacious to accommodate two or three persons. A number of poles are stuck in the ground, in a circular form, the tops of which are fastened together in a point by a leather thong. Over the summit of this conic frame is thrown a bullock's hide, to which others are attached, until the simple habitation is completely protected from the weather. Their clothing is made of the skins of the gray fox, the deer, the leopard, &c., sewed together with sinews of the animals, in the form of a blanket, which they throw over the shoulders, with the hair side next to their bodies, being tied around the neck, and hanging down to the feet. Both sexes dress in the same manner, the female being distinguished only by the profusion of her ornaments: these consist of shells, bones, and minerals of different kinds, and are worn about the neck and wrists: but the men have nothing of the kind.

Though the sole wealth of this people consists of cattle and sheep, they derive much of their sustenance from the ocean. Their implements for fishing and hunting are the spear and the bow; the former is made of a heavy hard wood, and is generally about sixteen feet in length; this wood resembles our yellow ebony, but the grain is not quite so fine. Their bows are made of the same kind of wood, and measure about five feet in length, being two inches wide in the centre. The arrows are of reed, about three feet long, and pointed with hard wood and flint. Both sexes are very expert with these weapons. I have frequently seen them shoot gulls on the wing at fifty yards' distance; and they seldom fail of placing the arrow in the body of the

bird. They are equally expert with the spear in catching fish,—frequently striking one of seven to ten pounds' weight at the distance of twenty-five to thirty yards. Their fishing excursions generally detain them from home three or four days: they salt all the fish which they take over and above what they consume on the spot, which they always eat raw, and the small ones are devoured without even divesting them of their entrails. They procure their salt from the springs at the head of the bay.

In appeasing the cravings of hunger these people are, in fact, horribly disgusting to a civilized person,—being actually fonder of the entrails of cattle and sheep than of any other part. On my killing some of these animals on the beach for the use of our crew, the natives devoured the entrails raw, before they were cold. I offered them some of the beef, but they refused it, and gave me to understand that the entrails were the best part of the creature in their estimation. In eating eggs, their fastidious delicacy is even more conspicuous; for they will not touch one until incubation is nearly perfected, protesting that fresh eggs are not fit for food. At their villages I observed that they roasted their beef, as they did also the flesh of wild beasts. The entrails, however, were seldom cooked, as the luxurious epicures preferred them warm from the animal.

When they have been successful in taking a great number of oceanic birds, which is often the case in the laying season, they bury them in the sand, with their entrails in them, until they become quite green. This takes all the fishy taste from them, and they become very tender. They then take out the entrails, skin the birds, and dry their bodies in the sun, which will so effectually cure them in forty-eight hours, that they may be laid away for twelve months without receiving any injury. Indeed such is the purity of the air, on this part of the coast, that I have had a quarter of fresh beef, weighing two hundred weight, hanging in the rigging until it became perfectly dry, without becoming tainted in the slighest degree, even next to the bone. What stronger evidence need be adduced to prove the excellence of this location for jerking beef? The atmosphere is pure, warm, and dry; and for ten months of the year there is scarcely a drop of rain. Very little falls during the other two months.

Voyage of H.M.S. Thunderer to the Mauritius and back.

Notes by Mr. H. Davy, Master, R.N.—1843.

(Concluded from p. 391.)

Longwood is situate in the most healthy part of the island at an elevation of 1,762 feet above the sea level, and is about 6 miles from James Town; enjoying during the time the sun is hovering as it were over the country, a climate equal to that of England, at the same time that James Town and the valleys are almost scorched up. It is open to the trade wind, which comes up direct from the sea, and blows over the plain

in cool refreshing breezes, tempering the summer heat, and rendering it a most desirable abode. The prospect is confined to the uplands, the most elevated portion of which is Diana's Peak, 2,692 feet in height,* but to seaward the sight is directed over an immense extent of waters, and the sea and sky appeared so blended, that they were not distinguishable from each other, while a passing sail looked but a mere speck.

New Longwood stands a few hundred yards in front or on the north side of the old house, and is a very handsome and convenient building, the rooms are spacious and airy, with a good verandah and walk in front. At present it is occupied by Lieut. Smith, R.N , who has charge of the magnetic observatory. The observatory is about 300 yards from the house, and Lieut. Smith was very obliging in shewing us the establishment, and explaining the uses of the instruments, &c. The following temperatures were observed at Longwood and the ships simultaneously,

Bar. obs. 28·35. Ther. 8 A.M. 57°, 2 P.M. 61°, Dip 21° Var. 23° Dew Pt. 54°
ship 30·14. . . 68 . 72, . Surface of the Sea 65

It was also stated at the Mauritius observatory, that the variation (westerly) was increasing.

From Longwood we started for a sight of Sandy Bay, the road to which is among the best cultivated part of the country, rich valleys with rivulets where cresses and lilies were in abundance, the hedges being thick with large delicious blackberries, and the roadside was margined with a profusion of geraniums and other attractive flowers, and the season was mid-winter. The slopes of the valleys were remarkable for the bright green and rich appearance, and the numerous seats and plantations were also happily situated, indeed it was with surprise that we witnessed those great gifts of nature, after hearing St. Helena so frequently termed "a great cinder."

A turn in the road brought us suddenly to the magnificent scenery of Sandy Bay; grand indeed it was, and beautiful withal. From the road we looked down some hundreds of feet, on a richly diversified country with numerous plantations, the sea in the distance, and those singularly shaped peaked mountains; Lot, Lot's wife, and their four children, beautifully outlined in the clear, blue sky. Leaving this much admired scene, we had a fine and rapid drive to Plantation House, the country residence of the Governor; and having seen the farm and extensive grounds, returned to James Town by the Ladder Hill, thus making the circuit of the island. To sail round it is 30 miles.

Time Ball.—The observatory on Ladder Hill is discontinued, and the building converted into Officer's quarters. The clock house, as it is termed, is one of the front buildings of the town, and the ball is exhibited twice a day, Sundays excepted; the times are mean noon at St. Helena, and one o'clock Greenwich time. This small but useful establishment is superintended by Mr. Gulliver, the master attendant, who also has the management of the watering; and the facilities he is ever ready to afford are most valuable, and in the case of the Thunderer were duly appreciated.

* Equal to the highest mountain of the Mauritius; those islands are 63° of longitude apart, equi-distant from the shore of Africa, and not very far different in their parallels.

Rollers.—Although so late as the end of July, full two months past the season for them, and amid settled tranquil weather, with a sea so smooth that landing could be made even on the rocks under Ladder Hill, in came this extraordinary swell called the rollers; the direction whence they were setting in was N.W. There was not the least danger, but it set the fleet rolling, as which would go the fastest. Rolling the trades down was easy going in comparison The heavy swell curling up like a great wall, breaking with tremendous force on the beach, and sending the surf into the fosse, was very like the Levant Sea, when the swell sets in, and strikes on the Coast of Syria.

Old Friends on a new beat.—It is somewhat an amusing incident at the present day, to come up with a Collier in the trades, bound probably round the Horn or the Cape, the real Gordie, in the same rig as when going up Swin, except the pair of royals, and though brother Jonathan, describes these sort of craft as stem and stern sawed off square, with a run like a sugar box, yet they bundle along and do their work wonderfully well.

A water-logged timber ship homeward from Moulmein, had fortunately reached St. Helena, and was discharging cargo; she lay close to us, and the constant pumping, the timber-men's song, and the rafts, however familiar in the St. Lawrence, seemed there both strange and unexpected.

Since my last visit to this island, it has become a place for the disposal of condemned slave vessels, and at the present time there were the remains of several hulls in the various stages of being broken up, the supply of wood material for fuel and building purposes is very reasonable, and the inhabitants hail the arrival of a *prize* as a great boon. Simon's Bay is another place where the shore is seen strewed with the ribs and trucks of slavers, and Sierra Leone besides many other ports is also used for the like purpose, proving the truth of the remark that America builds the slave vessels, and Great Britain breaks them up.

July 31st.—The Governor, and principal Officers, and inhabitants of the island with several ladies, made a farewell visit. On leaving, His Excellency was saluted with 17 guns; the sails were then let fall, and at 2h. 40m. we sailed for Ascension. It was calm on deck, with a light air of eddy wind aloft from the northward, with which we cast on the starboard tack, although only $\frac{1}{4}$ mile from the rocky shore, leading away to Lemon Valley, but these 84s are as handy as jolly-boats, and light as the air was, yet bit by bit the valley was opened out, and by 5 o'clock we were without the influence of the island, and trimmed away to the trade wind, while the fleet at anchor were still lying at short stay awaiting the breeze. Skysails and royal studding sails are appreciated in such cases; these sails appear to have gone out of fashion of late years, but in large ships, where the skysail is equal in size to a frigate's royal, they must prove a valuable aid. In the Mediterranean I have seen them stand well going over 8 knots; their great assistance however was in leaving port, with a light land breeze aloft, whilst probably the courses and topsails were either of no use, or lying aback, for streams of wind are frequently experienced in that sea, blowing from opposite points, and it may be supposed that on such occasions those lofty sails, if in chase, would materially contribute to do the trick.

Dimensions of two of them.

Main Skysail	10 cloths head,	14 cloths foot,	14 feet 6 inches depth.
" Royal studding-sail	6 . .	9 .	21 . 6 .

Ascension.—From the prevailing westerly set and increased variation, the present course to Ascension is N.N.W., nothing to the northward, which differs near a point from that recommended in the Directory for the South Atlantic. The trade wind between the islands was so light, though the distance was under 700 miles, that it was on the fifth day before we reached the East Point, from which to English Roads is about 12 miles. A high rocky inlet about a mile from the Point lies so close to the shore, $\frac{1}{8}$ mile, and so resembles the adjoining heights, that at first it looks like a projecting cliff. It might with propriety be called Bird Islet, for it appeared to be a favourite abode of the man-of-war bird, and as we closed it and alarmed the rookery, they flew off, and were hovering over and about in great numbers. For the largest class ship, $\frac{1}{2}$ mile is sufficient offing, and leads well clear of the shoal which projects out from the North Point; this point and the N.W. coast is low, while the S.E. part of the island is high and precipitous, which as we skirted its rocky shore, with a fine rattling No. 5 breeze, had a wild, desolate appearance. Not a sign of life was there, save the bright spots and white buildings on Green Mountain, and these were seen amid clouds of mist and hills of cinder. Having rounded the North Point and hauled up on the Port Tack, we fetched into a berth, and anchored in 10 fathoms, coral, sand, and turtle grass.

Extremes of the land	S. 45° and N. 55°E.
Cross Hill Signal Staff	S. 26 E.
Green Mountain	S. 45 E.
Fort Cockburn	S. 5 W.

This was a safe and convenient spot for a large ship, the anchor was let go about fifty yards from the mooring buoy, and we were thus lying abreast the western part of Sandy Bay, with the discoloured water of the shoal, and the N.W. buoy at some distance from the starboard quarter.

But for Cross Hill and the Green Mountain, Ascension would be barren indeed, for elsewhere there is not a blade of grass to be seen; the mountain ridges and jagged peaks have a dark sombre hue, while the slopes and plains are strewed with sand, ashes, and lava, and with a light surface in many parts, from the multitude of sea birds resorting thither, resembling manured lands. The grandeur, beauty, health, and means of life, are all centered in Green Mountain; it is this favored region that renders Ascension habitable. The height of the mountain is 2,818 feet, and the ascent from George Town is 6 miles, the houses and farms being situate 500 feet below the summit; several thousand acres are now in cultivation, and it is expected that many more will yet be brought under tillage; the whole with the stock, consisting of bullocks, calves, sheep, and poultry, looked in a highly flourishing condition, and we were supplied, though such a numerous family, with beef and vegetables. The water is conveyed from the mountain to the Jetty by pipes

of 3½ inch bore, and 33,000 feet in length, reservoirs are formed, and Ascension can now boast of a water tank. The vessel is called the Fanny, and was a slaver taken by the Madagascar; she holds 24 tons of water, and made her maiden trip on this occasion.

I think we may cry shame, on the Cape and St. Helena, to be beat by a few marines.

These valuable springs may be said to constitute the chief treasures of the island, one of them still goes by the name of the celebrated navigator, Dampier, which was discovered on the 26th February, 1701, and it is related in the Directory that he succeeded by watching a flock of goats, and observing where they went to drink. It appears by his voyages that returning from the last of these, having discovered New Britain, his ship, the Roebuck of 12 guns and 50 men, sprung a leak, when near Ascension, and that having reached English Roads, he warped her into Sandy Bay in 3½ fathoms water where she sunk; the spring was discovered on the following day, and now says Dampier, "we were, by God's Providence, in a condition of subsisting some time, having plenty of very good turtle by our tents, and water for the fetching." He remarks also, that the goats, land-crabs, man-of-war birds, and boobies were good food, and the air on the mountain exceeding wholesome. Three ships of war put in, himself and crew embarked in the Anglesey, and they sailed from the Island, May 8th, 1701.

Turtle are as plentiful as ever, and as fine; they are undoubtedly superior to those of any other part of the world we know of, and hence probably the increased value of them, for the price has rapidly gone up from to 0 to 30*s*. and the charge now is £2 10*s*. each. The ponds which are on the Sandy Bay side of the town, were well stocked with fine plump fellows, varying in weight from 400 to 600 lbs.

Fish were very abundant, large shoals were in the roads, and a myriad of birds darting and plunging at them with surprising swiftness, glutting themselves; in fact the garrison must be well supplied, having such fine beaches for hauling the seine.

George Town is but a small establishment, sufficient only for the garrison and for the wants of our African cruizers; the hospital, barracks, store-houses, officer's quarters, a square where the married people reside, and sheds for a few Kroomen are, I believe, about the whole. The signal station is on the top of Cross Hill, at an elevation of 894 feet, and half way down is the Commandant's House a very pretty looking place, with a cluster of trees shading it; it forms a conspicuous and useful guide in approaching the roads, as by bringing it to bear S.S.E. when rounding the shoals from the S.W. those dangers will be avoided. The N.W. buoy marking its limit, is a coppered buoy and is become so much like the sea in colour, that it is very difficult to make it out until close to. The Ramsey was wrecked there a short time since, a fine ship of 1000 tons, under a very valuable cargo, and we witnessed the narrow escape of a fine French ship, with a heavy press of sail, she was indeed close on the shoal, when the discoloured water warned them, and she was saved by bearing up and steering at a right angle to her former course. The buoy should be painted black or white, and be made a beacon buoy, but this department and some others require the super-

intendence of a sailor man, and in many ways the value of this little colony would be much enhanced, if supervised by a Naval Officer.

The New Fort, called Fort Cockburn, is a substantial, handsome building, and does great credit to the people who raised it. It is armed with 24-pounder guns, and there appeared to be no lack of material; it however needs a few Paixham 68-pounders, which indeed may be said of St. Helena, the Cape, and most of our Colonies. Instead of the Barrack Square, which is a dusty, inconvenient place for taking sights, Fort Cockburn is being preferred, and a very clean, quiet spot it will be found; the position of it, deduced from that laid down by Captain Fitzroy for the square, is lat. 7° 55′ S., long, 14° 24′ W., and by a French Nautical Almanac, 1834, lat. 7° 57′ S., long. 13° 58′ W.

Singular that the French who are generally very correct, should be so much in error in this instance.

In reference to the rollers at St. Helena, it was ascertained that at this place they set in a day later, and broke with such force, as to wash over the Jetty head.

Temperature, therm. 76° to 79°, the sea 75°, barometer 30·16, steady.

In mentioning the buildings of George Town, I should notice also, to the great credit of those who have already done so much, that a church is now being built, which when completed and a clergyman appointed, must confer a blessing on that small community placed as it were in the deep solitude of a vast ocean, where the voice of religion would be heard with peculiar reverence and awe. The walls could be quickly run up as the building material is plentiful and easily worked, the stone being a very coarse description of solite.

I am not aware if the attempt has been made, but it appeared a climate and soil fitted for the growth of the cocoa-nut, and wherever that useful tree has been introduced, it has been highly esteemed. At Ascension in particular, it would indeed add a beauty to its most sterile walks, and relieve its naked desert like appearance. The unimpeded fire of a vertical sun may be imagined, but standing on the heated dust of George Town, how prized would be the waving branches of some tropical tree.

August 7th.—Sailed from Ascension and steered north for longitude 18° on the equator, it being the season of the south-west or line monsoon, which blowing over the interval where calms and variables are usually met with, would seem to warrant that course in preference to one more westerly. On the fourth day carrying a brisk trade wind, we crossed the line and in 3° north the breeze without decreasing in strength No. 5, veered from south-east to south and settled into the monsoon between S.S.W. and S.W., with which we made 200 miles a day, continuing on the north course for mid-passage between the African shore and Cape Verd Islands: nor does there appear any reason at the fit period, why this near route should not be attempted, the wind then being so constant. It is indeed a most favourable time for homeward bound ships, and the *vicé versa* we had ample opportunities of witnessing in vessels struggling to make southing.

We passed north of the sun near abreast of St. Jago the meridian altitude being 89° 38′, and with the exception of a few hours calm,

ran through with as fine a south-wester as the north-east trade outwards. Nothing of the famous Bonetta Rock did we see, or expected to, and this alleged cause of so many shipwrecks, must be looked for very *close* to Bonavista, at least such was the opinion entertained at Porto Praya.

August 18*th*, in latitude 17°, longitude 22°, being just north of the parallel of Sal Island, we got the north-east trade, and keeping a good full on the starboard tack, weathered St. Antonio by sixty-three miles, the inside passage proving thus far fortunate. In former voyages I found in crossing this trade that beside the variation it was necessary to allow one point for lee way, set to leeward, &c., and by making the same allowance in the present instance, it gave the course made good without a mile of current appearing on the account.

On the 22nd we crossed the Tropic in 28°, and by a good register thermometer which showed 77° in the shade, the sea was 74°, and at a depth of 150 fathoms 63°. The average rate of sailing was 6½ knots and the trade failed in latitude 28°, it had favoured us through eleven degrees of latitude, which appears to be the minimum breadth of the north-east trade wind for the year. With light variable airs from the southward 0 to 3 weather B.V. and B.C.V. we steered N.E.b.N., for St. Michael's and anchored there Sept. 3rd, in twenty-seven fathoms sand, shells, and coral; the Cathedral N.N.E. ¼ E., one and a quarter mile; Punta Galera S.E.b.E.; and the western extreme of the land N.W. ½ N.; found the flood tide setting south-east three-quarters of a mile an hour.

For three days we were slowly nearing the islands with the very finest of summer-like weather, the sea full of blubber and small snakes, there was a heavy north-west swell with ripplings in lines north-east and south-west, which continued until near St. Marys, and the day after arriving at St. Michaels, it came on in rollers, similar to those previously experienced at St. Helena, just such another rolling bout, and the landing was equally difficult. It subsequently proved by the arrival of a dismasted vessel at Plymouth that a very heavy gale had been blowing not far from where we were so impatient of fine weather.

The city of Ponta del Gada with the surrounding country richly cultivated to the highest eminence, and sprinkled with plantations and villas, looks well from the roadstead and promises much. We were there, however, but a very short time; the Consul, Mr. Hunt, was very obliging, and enabled our numerous parties to make the most of the few hours allowed them. The English residents spoke highly of the country and of the efficacy of the hot springs at Furnas, and from the fineness of the climate coupled with the abundance and cheapness of the necessaries of life, that St. Michaels holds out advantages to the invalid much superior to those of Madeira. Having obtained a plentiful supply of refreshments we sailed for England on the following day.

September 4*th*.—Steered out S.E.b.S., and the next morning being abreast of Villa Franca with an eight mile offing, we had a good sight of that remarkable rock, the Porto do Ilho; it fronts the western part of the town, and the space between is rendered a secure anchorage for coasting craft, but the rock itself, or more properly the islet attracts great notice, from the circumstance of its having a basin where small

vessels ride securely except with the wind in, which is open to the east, it is supposed that this basin is the crater or remains of an old volcano. As we stood alongshore with the trend of the coast by Villa Franca and Povocam, those places, the cultivated lands rising in terraces and straggling fishing stations, on the beach, bore a striking resemblance to that part of Spain between Malaga and Gibraltar.

Some fishermen from Povocam supplied us for a mere trifle with fine rock fish which proved a great treat, and is another item in the list of good things to be had at St. Michaels. By sunset we were clear of the island, and shaped a N.E.b.E. course, which was not direct for the entrance of the channel, but to push up to the northward where we expected stronger winds.

Having now bidden adieu to our last resting place, I annex the following table of the prices of provisions, and this in consequence of experiencing a want of information on that subject; indeed for such a number of people it is of much importance, and was greatly needed in procuring supplies.

PRICE OF PROVISIONS ETC.

Places:	Bread.	Flour.	Milk.	Eggs.	Butter.	Cheese.	Loaf Sugar.	Soft Sugar.	Tea.	Hams.	Potatoes.	Onions.	Cabbages.
1843.	lbs.	lbs.	qrt.	doz.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	cwt.	lbs.	each
	d.	*d.*	*d.*	*d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*s. d.*	*d.*	*d.*
Devonport.	1¾	2	3	9	1 2	0 10	0 10	0 7	8 0	0 9	2 6	2½	1
Cork.	2½	2½	2	6	0 11	0 10	0 9	0 9	8 0	0 7	2 0	2½	1
Port Praya Cape Verds,	—	—	12	9	—	—	—	—	—	—	—	3	—
Cape G. Hope.	4½	3	12	24	1 3	1 6	0 6	0 4	4 6	1 1	18 0	4	5
Mauritius.	3½	5	12	30	2 6	2 3	0 10	0 3	6 0	2 3	50 0	6	8
St. Helena.	4	5	12	30	2 0	2 0	0 10	0 4	6 0	2 0	20 0	6	7
Ascension.	—	—	—	24	—	1 6	—	—	—	1 2	—	6	—
St. Michaels.	2	3	6	6	1 0	0 7	—	0 4	—	—	2 0	3	2

Places.	Oranges.	Sheep.	Average Weight.	Mutton.	Beef.	Pork.	Fowls.	Ducks.	Turkeys.	Geese.	Ale.	Porter.	Washing.
1843.	doz.	each	lbs.	lbs.	lbs.	lbs.	doz.	doz.	each	each	doz.	doz.	doz.
	s. d.	*s.*		*d.*	*d.*	*d.*	*d.*	*s.*	*s.*	*s.*	*s.*	*s.*	*s. d.*
Devonport.	1 2	38	76	5	5	5	21	23	6	4 0	8	6	2 0
Cork.	1 2	30	67	6	6	5	14	18	4	2 6	8	5	2 6
Port Praya Cape Verds.	0 2½	—	—	—	4	6	20	26	5	6 0	24	24	4 0
Cape G. Hope.	3 0	15 mer. 15 cape 12	40	4	6	6	20	30	6	4 0	12	10	2 6
Mauritius.	2 6	50	60	—	6	10	36	48	25	8 0	12	20	3 0
St. Helena.	2 0	50	50	10	10	10	48	48	22	10 0	12	15	4 0
Ascension.	—	—	—	12	—	12	—	—	—	—	12	12	2 6
St. Michaels.	—	12	28	4	4	6	12	15	7	4 0	—	—	2 0

Captain Becher's Horizon.—This valuable appendage to the sextant, which is now practised at the Naval College at Portsmouth, and has been partially in use at sea for some years, might seem not to require any mention in these notes, but having used it in its less perfect completeness in the Gulf of St. Lawrence, and on the coast of Nova Scotia, I take this opportunity of recording a few observations, which were made as a trial of the instrument in its present improved state.

Obsd. alt. of Sun by Mercury Horizon.	Obsd alt. of Sun by Pendulum Horizon.	Difference.
° ′ ″	° ′ ″	′ ″
47 10 02	46 20 00	50 0
47 23 57	46 37 40	46 17
47 36 42	46 49 10	47 32
47 48 57	47 03 40	45 17
48 01 37	47 13 00	48 37
238 01 15	234 03 30	237 43
47 36 15	46 48 42	47 33

Correction to be added to alt. by Pendulum Horizon, 0° 47′ 33″.

Aug. 11th for the latitude at noon, smooth water.

	Sea Horizon.	Pendulum Horizon.			
	° ′ ″	° ′ ″	′ ″		′ ″
	75 6 0	74 13 40	Diff. 52 20	Dip.	5 20
	13 30	21 40	51 20	In Cor.	0 50
12	5 00	22 10	52 50		
In Cor.	50	Cor. + 47 33*			6 10
			Mean 52 20		
	75 14 10	75 09 43	6 10		
S.D.	+ 15 48	+ 15 48			
			+ 46 10	Cor. for Pendulum Horizon.	
	75 29 58	75 25 31			
Dip. Refr	— 5 33	R. — 13			
	75 24 25	75 25 18			
	14 35 35 S	14 34 42 S			
	15 24 00 N	15 24 00 N			
Lat.	0 48 25 N	0 49 18 N			

* First correction preferred.

Magnetism.— It being useful in a voyage to the southern hemisphere to ascertain where the poles become reversed, a piece of bar iron was suspended for that purpose, and frequent experiments were made in approaching the equator. Outwards, the lower end of the bar attracted the north point of the compass in lat. 7° N., long. 23° W., and became a north pole. Homewards, the upper end first attracted the north point of the compass in lat. 6° S., long. 16° W.

Chronometers, &c.— Ships lying in Plymouth Sound during the winter months find it next to impossible to get rates for their chronometers, and to obtain the error is scarcely less difficult; the only means while the Thunderer remained there, was through the kindness of Mr. Cox in allowing one of his chronometers to be taken on board occasionally and comparing. By the error thus obtained, comparisons were given to the fleet of Merchant vessels at anchor, and I had opportunities of knowing that but for this chance, rough as it was, many of them would have gone to sea out in their longitude from ten to thirty miles. Weeks are sometimes spent by vessels from the river putting into this port, and having to wait for a wind. It would appear, therefore, that a Time Ball is much required.

As an instance of this in vessels recently from England, it may be mentioned that outwards when near the Cape Verd Islands, a British barque going the same way made her longitude by chronometer twenty-five miles too far to the westward. Longitude is of so much importance in navigating near these islands, and lying as they do in the direct road to India, &c., that running by night or in thick weather it is not surprising that shipwrecks should happen under such circumstances. A blind confidence in chronometers has doubtless been the cause of many disasters, and unless their errors be well ascertained, and the rates corroborated by daily comparisons, the Greenwich times must be uncertain and ought to induce great caution in running. It is the dependance universally placed in these instruments that calls for every attention and facility being afforded at the ports or places where vessels resort to, and the Downs and Plymouth stand greatly in need of Time Balls. It is in the winter months when these are so necessary, when the Downs is frequently full of shipping; and it is likely that a Time Ball at Deal would confer a greater benefit than that at Greenwich.

The advantage of such an establishment was manifest in the winter of 1842, so famous for westerly gales. At that time the Downs was crowded, and the Thunderer was requested to make one o'clock Greenwich time by dipping an ensign from the mast-head. With a hand-lead secured to the tack it can be done with great exactness, and wherever men-of-war are, a similar method might be usefully adopted by the senior officer's ship. Merchant vessels would then have opportunities of rating their chronometers instead of the risk attendant on carrying them for comparing. And since daily comparisons are indispensably necessary for their proper management, it is apparent that all ships should be supplied with not less than three chronometers.

The two following meridian distances came so close to those measured by the Beagle, in her chain of distances round the world, that they are probably worth recording. Captain FitzRoy's latitude and meridians were used in rating the chronometers.

Simon's Bay, Dockyard, to Cooper's Island, Mauritius.

By 3 chronometers in 23 days, passage occupying 21 days 2h. 36m. 21s.
The Beagle to Simon's Bay with 13 chronometers 25 days, 2h. 36m. 21,8.

Ascension to Plymouth Breakwater 50 days.

		Error by sea rates.	Errors by sights at Breakwater, Sept. 26th.
No, 1606	Molyneux & Sons,	1h. 42m. 17s·5	1h. 42m. 18s.
962	Arnold & Dent,	0 29 44	0 29 40
467	Barraud	0 10 53	0 10 53

Meridian distance 41m.

No. 1606 and 962 had been in the ship 3½ years.

In conclusion, it would appear, from a careful consideration of the prevailing winds, the limits of the trades, and the period of the monsoons, that the most favourable time for leaving England for the east is in all February, and from India homewards is in all March. This I apprehend would be the result if a thousand journals were to be examined; the climate will also be the finest, being the winter or cool season in the southern hemisphere.

A word to the *Nautical* in parting. The present year will complete 13 goodly-sized volumes, the pages of which contain much to interest the navigator, in fact they comprise directions for a great portion of the globe, but these are so mixed with other matter as not to be so available for the instant reference which is sometimes required in a busy seafaring life, in the moment too, when it may be of its greatest value. And as they supply a valuable appendix to the Book of Directions, accumulating from researches over every sea and shore, I would submit to the talented Editor, the propriety of publishing a volume of Index at the close of the current year, of subjects strictly connected with Hydrography, and in granting this, I may presume to add, he will meet the wishes of a large body of his obliged friends.

[We may in our turn, perhaps, be allowed to add a word, though not a parting one we hope, to our valued contributor Mr. Henry Davy, the late Master of H.M.S. Thunderer, whose "*Notes*" made during the voyage of this ship "to the Mauritius and back", we will venture to say, have supplied both amusement and information to the readers of the *Nautical*. They will, we are sure, agree with us in pronouncing them as the production of an intelligent seaman, and a valuable officer, gifted with accurate observation, and the power of recording it. A repetition of such "*Notes*" therefore, we hope yet to see at some future period in the *Nautical*. And now to our friend's proposal.

The Index, that essential part of a work, to all the volumes, and extending to all subjects included in them, has been some time completed, and this too at some expense. But how to place it in the hands of our readers is another affair. This however we hope to see soon effected, with the assistance of the advertisement in another page of our present number.]

Scientific Impertinencies.

Much mischief is done in the world by people not knowing exactly what it is they would be at. We were led into this train of moralizing lately, while ruminating on some differences of longitude, which, instead of being followed by the old familiar designations, East and

West, were preceded by the algebraic signs, *plus* and *minus*. Now, as E. and W. have but one meaning, and that easy to the meanest capacity, while *plus* and *minus* in their most common acceptation, imply simply, addition and subtraction, (which are *not* the meanings intended when they are prefixed to meridian distances,) surely these signs should not be permitted to usurp the place of the old distinctions, unless it be shown in what respect E. and W. fail in the duty expected from them, and how this failure is remedied in the algebraic symbols, which are in their adoption still more arbitrary and conventional.

Mathematicians indeed employ these signs extensively. Thus they call *up, plus,* and *down, minus.* But even a mathematician, on whose brains symbols and figures of every conceivable kind are as regularly scored as the meridians are upon the slate globes, used at school for geographical exercises, only uses these signs because he cannot do without them. Some, indeed, have a natural bias for the elaborate; Hudibras was an example,

> "For he by geometric scale,
> Could take the size of pots of ale;
> Resolve by signs and tangents straight,
> If bread or butter wanted weight.
> And wisely knew the hour o' th' day
> The clock should strike, by Algebra."

This however, after all, is a matter of taste or habit, and one notation amounts to nearly the same as the other, for they who attend to these particular questions can use the signs or not as they please, (although we contend that in matters addressed to the nautical community E. and W. are better), and to those who do not trouble themselves about such matters the distinction is immaterial. But the next grievance is of a much more formidable kind, and it is difficult to think with patience upon the unheard of innovation of calling the variation of the compass the *declination!* If this term passes current among seamen, the variation of the compass will be ever afterwards confounded with the declination of the sun, which, of course, is the first and only idea suggested to the mind of a seaman, since navigation has been a written science, by the term "the declination." And the only method of avoiding this disastrous confusion will be, our submitting to use, upon every occasion, the cumbersome repetitions, "declination of the sun," "declination of the compass," to the utter destruction of that brevity and simplicity, which should be the characteristics of the elementary terms of every art and science.

The term declination, which is of Latin derivation, has long been known to the learned, though, fortunately for us, they have hitherto succeeded in keeping it to themselves. But it has at length, been formally introduced to the Officers of the Royal Navy, by the Royal Society, in their instructions to Sir James Ross on his late voyage to the South Seas. But even though restricted by the more judicious among those seamen, who may for the sake of a partial conformity, find occasion in purely scientific questions, to use the new term, yet—being a "learned" or "scientific" one—there is too much reason to fear that want of reflection, or perhaps vanity, may induce some weak-minded individual here and there to endeavour to bring it into familiar use;

indeed, it is more than probable, that the first soil suited to the, as yet, delicate exotic, will be found in heads of a softer description.

But this term, if it enters the service at all, must come in through the cabin windows; it will never get on the quarter-deck by its own merit, and must look to favour alone for promotion. Or, if the captain, while the magnetic fit is strong upon him, bites the officer of the watch, the officer the quarter-master, and the quarter-master the man at the wheel, the disease will spread. But even at this rate it will be a long job; for there are a quarter of a million of men to bite, and some of the bitten may perhaps be brought back to reason and common sense before their case is desperate.

If the Captains would at once go over in a body to the enemy, then indeed the thing might be done as triumphantly as the most ardent zealot for raising the "scientific" character of our seamen could desire. For who would dare resist? Would your unfledged gosling of science, who hardly knows whether land or water is his element? Your starveling apprentice, who has neither capital nor credit, and must eat what meat his masters give him, and be thankful—take a step which would ruin his reputation for ever? Your volunteer of the first class in science, your scientific cadet, who has got as far as *plus* and *minus*, and who is on his good behaviour for the next rating,—would he, we ask, in the immediate presence of a constellation of living luminaries of science, venture to squeak out a meek dissentient? Would he, surrounded by half a dozen of the scientific giants of these days, every one of whom could gobble him up in less than the time of "a horizontal oscillation," incontinently, irreverently, and recklessly, let fly the old and vulgar word variation? He'd be a lost man! What would avail a few miserable grains of common sense, and a paltry dozen or two of years of professional experience, as armour against the discharge of the algebraical sum of an infinite series of corpuscular magnetic forces? Or, if it was not worth while to bring out such a tremendous park of artillery to play upon his shrinking form, how swiftly would they demolish the poor wretch and his contemptible opposition together, nay, it would be easier than saying the word, (as Julius Cæsar explained to a man whom he threatened to kill on the spot), by just turning on him the Gorgon glance of the "declinometer" itself, an engine which Homer, Tasso, and Milton would have given up all their Spanish stock, and Pensylvania bonds into the bargain, to have been able to lend to their heroes for one afternoon.

But things are not so bad. A powerful drag-chain upon the impetuosity of "scientific" chariot wheels, will be found in Old-stager-ism. The Captains are not likely to set us an example of wholesale desertion from the language of our forefathers; and attacks of magnetic fanaticism, (like those of influenza and mesmerism), will affect such persons only as are constitutionally predisposed. The leading symptom of this predisposition we have already delicately hinted at. Discretion too, the better part of science as of valour, will dissuade the scientific officer from talking to the man at the helm about declination or fluxions, or to the armourer about metallic oxides; and thus this weak and clumsy phraseology will be confined to its proper limits, mere scientific communication.

Although nothing can be worse than calling one thing by the name

of another, yet it is not the mere names that lead to confusion, if circumstances introduce distinction. If for example, the Lords of the Admiralty, in a generous fit of scientific enthusiasm, were to issue an order that in future the fore-top-sail, in all her Majesty's ships, should be called the jolly-boat, there is nothing in this that would ultimately entail any confusion in practice. Few vessels, for instance, have been met with at sea, scudding under a close reefed jolly-boat. The fore-top-sail cannot be sent ashore with the purser's steward and his bags in it for fresh beef and vegetables. Neither, on the other hand, is the jolly-boat ever set with two reefs out and a top-gallant-sail over it. No man going to relieve the look out on the fore-top-sail-yard proceeds to perch himself on the stern davits, in order to be able the better to make out a strange sail ahead. Again, as the crew of the jolly-boat are not generally recruited from the fore-top, the cry of "Away there jolly-boat boys," would not disturb the slumbers of those who had taken the liberty of casting loose the fore-top-gallant-studding-sail in the top, any oftener than it does now. In all these cases the two things would be no more confounded together than the pendants at the lower mast-heads are, at present, with the mast-head pendant.

It is in the intermediate, or the *transition* state, that the mischief of change is felt, while one half the people understand one thing, and the other half something else,—a state of things by all means to be avoided. Thus, on the officer of the watch calling out—(before the ingenious change we are supposing had fully pervaded the minds of all concerned,) "Man the jolly-boat clew-lines"! the fore-castle-men and fore-top-men thinking of course of nothing but *their* jolly-boat, quietly hand out the clew-lines, and stand by the sheets. The after-guard and mizen-top-men on the contrary thinking only of *their* jolly-boat, and conceiving in the hurry that a man has fallen overboard, make a desperate sally aft followed by the main-top-men and marines; the fore-top-men catching the contagion of alarm drop the clew-lines; the men at the sheets, seeing no one at the clew-lines, drop *them;* and in the meantime all the idlers, and half the watch below, come rushing up the hatchway to see what is the matter. At length, by the exertions of the officer and midshipmen of the watch, the whole *posse*, frustrated in the design on the boat, is in a fair way for the forecastle again, where after trotting the whole ship's length they arrive brokenwinded; each individual, with hurry and agitation, having scarcely any strength for a pull on the clew-line, supposing that the sail has not blown out of the bolt-rope in the mean time.

What blunders and confusion would arise from having two declinations! What endless mistakes between N. and W. declinations, and S. and E.—between sometimes taking the wrong quantity out of the Tables, and at others in writing one for the other in the ship's log. How fortunate for those steady seamen who punctually "correct the declination" every day at exactly the same half-hour, and who would with equal punctuality correct half a dozen declinations, if they had them,—that the allowance of grog is diminished! The word will be a new excuse for foundering and starving at sea; and future shipwreck committees will add to the old list of evils, the new science-born one,—taking the declination of the compass, for the declination of the sun!

A dandy, to hide the nakedness of some wretched remark on a cat, calls it "an animal of the feline species." The newspapers, instead of saying that somebody lunched, or had something to eat, prefer to record the event by "partook of a slight refreshment." Some writers of romances and magazine articles, conceiving that the word "birds" must be vulgar because it is in general use, treat their fond admiring readers with "feathered songsters", "tuneful choir", "tiny warblers of the grove", "plumed serenaders", "air-cleaving vocalists", &c. Yet alas! so fickle is every kind of taste, but that which is alone permanent because it is the highest, that even those pretty terms have already begun to fall as flat upon the sense as dead small beer; and where the writers, fair and ugly, are to go for new ones, when the public stomach is once fairly cloyed with such sweets, is more than we can tell. At meeting with such empty trash, a reader who has any perception of the difference between a forcible or elegant expression, and sheer affectation, feels a kind of nervous impulse to shrink his legs up like a galvanised frog. All these and many other offensive excrescences of speech, arise out of the same feeling,—vanity, indistinctly conscious of imbecility,—and the remedy for such a disorder, we respectfully submit, would be a course of sea-sickness. This last disease would quickly starve out the other, in the most hopeless case of the nonsenso-romantic school that ever was produced. The proper cure is, naturally, abstinence from inflaming causes; and we are indebted in part for our suggestion, to the Delaware Indians, who take an emetic as the most expeditious method of fasting.

Now they who indulge in the euphuistic style are the very people who would be the first to call variation by the new name "declination"; and we have introduced this little literary digression, to impress this truth on the mind of the reader.

But the silly mania for grandiloquent terms has not been content with even the compass, and the latitude by meridian altitude of the sun. With its insatiable appetite for mischief it has fastened lately on another somewhat serious subject to meddle with,—lighthouses. We shall bestow merely a passing notice on the word "Pharonology", which has for some time cut a figure, sublime or ridiculous, in our books of sailing directions. It is of no very momentous consequence, whether a class term like this is concisely packed into a small number of good wholesome English syllables, or runs to belly in a cumbersome Greek compound, provided only that the Pharonologists do not mystify their accounts of lights, and that when they come to describe any particular lighthouse, they shall drop Greek or Sanscrit, and tell us what they have to say about it, in such plain, seamanlike language, as that we shall, at least, know the light when we see it.

But, what are we say of such an account of a light as the following, which appears at p. 49, of the *Nautical Magazine*, an account which, we will venture to say, stands alone in the history of lighthouses, and human perversity.

The light on Fort St. George, Madras, was to be lighted on January 1st, 1844, and the description, dated East India House, December 13th, 1843, goes on to say,

"The light is of the 'flashing description,' and the duration of the flashes to that

of the eclipses or dark periods is in the ratio of 2 to 3,—but as the nature of the motion is reciprocating instead of rotatory, the above ratio merely expresses the average proportion of the light and dark intervals, which are themselves variable, according to the position of the spectator. The rapidity of movement is so adjusted, that the duration of the flashes will vary from 0 sec. to 48 sec., and that of the eclipses from 0 sec. to 72 sec., the sums of the duration of light and darkness bearing, however, in every position, the constant ratio of 2 to 3".

Well, after Daugerreotype and lights with "ratios" there is no saying what we may live to see. As to the word "reciprocating" above, which we shrewdly suspect will stick in many a gizzard, it may be perfectly correct for all that we know about it, which is nothing; but we think it a pity to add new terms to our lighthouse vocabulary, which, with its "revolving", "intermitting", "eclipses", &c., all describing very nearly the same kind of thing, already errs on the side of redundancy. We have also failed rightly to apprehend the *sequitur* which should belong to "as the nature, &c." But it is the word RATIO that makes us tremble for our future "Pharonological" descriptions, and calls for the sympathy of every one who knows what a sea life is, for the poor fellows who have to read those descriptions, and to act upon them. Time was when a man, on seeing a variable light, might take out his watch and count the seconds, while the interval of illumination or that of darkness lasted, and having thus identified the light there was an end of the matter. But it would appear that this mere evidence of the senses is not refined enough for the "Schoolmaster abroad", and accordingly before he gets home again to his birch and latin grammar, he suggests a more imposing operation; so the measuring of the length of the interval, which was in time gone by the whole proceeding, is now become merely the point where the seaman's sorrows begin. He has now a further demand made upon his attention, his talents, and his time. He is called upon to perform an act of *ratiocination*. The elements of the observation, the intervals, are now but the materials of a *calculation* which he has to make! Let us suppose a case. The officer of the watch reports to the captain in his cot, a light in sight. The captain asks what sort of a light it is. The officer answers, that it shines 34 sec. and 7 tenths, and then disappears for 52 seconds. The captain replies, with perhaps a hasty expression or two not very complimentary to the promoters of the new invention, that it is of no use to tell him all this, unless he tells him also the *ratio* of the two quantities he has mentioned. The officer, struck all of a heap by this news, (which of course he knew perfectly well he ought to have been prepared for, only he fondly trusted, good easy man, that the light would not be made till his watch was out,) sneaks out of the cabin, and with a mind ill at ease regains the deck. A quarter of an hour elapses: the captain turns to ring his bell, but thinks upon the whole he may as well go on deck himself. He finds a squad on a carronade slide, in anxious consultation. They have collected all the navigation books of the past and present centuries, all their arithmetic books, and school copy books, they fail however in discovering this precise proposition, which, if these logarithmic lighthouses come into fashion, must be inscribed in every watch bill—"given two numbers; to prove that they are, or are not in a given ratio". The captain, an educated man, takes a part; but the

quarter-master's lantern, though admirably adapted for finding the way to a midshipman's hammock, denies the illumination favorable for the solution of a mathematical problem—and so, what with the bother, a very excusable irritation, and the anxiety of charge, he writes the terms of his proportion in the wrong order, and confusion gets worse confounded. There is no mathematician on board to appeal to. Of course not. A man who is ready for any problem in "ratios", the moment he wakes out of his sleep does not go poking about in a ship,—he looks out to be Chancellor of the Exchequer. To make more certain they take a new sight, but,—worse and worse! the ship has changed her place, and the intervals are no more the same, "being themselves variable, according to the position of the spectator", so says the description. They are at their wits end. They invoke the shades of Cocker, and every other arithmetician that ever was employed in perpetuating the immortal truth, that two and two make four,

"But not a rascal comes to ease their woes".

In the meantime daylight appears, and their distress is instantaneously dissipated by the extinguishing of the light.

These "ratios" will be the death of us. It is all very well for a gentleman in a soft, cozy, well-stuffed rail-road carriage, to while away his unsnored time in comparing a number of seconds with the number of quarter-mile-posts he passes. But it is a very different affair to call upon a seaman to exercise himself in intellectual gymnastics, while the time is fast running out in which he must decide whether he will stand boldly in, or haul off under close reefed topsails.

It is lucky for the practical character of Capt. Fitz Roy's bill that this account did not appear before the draught of it was finished. He would have been obliged to introduce a clause to render it obligatory upon every seaman ambitious of taking charge of a watch, that he should know so much of the 5th book of Euclid, or of the subject of "ratios" generally, as should enable him to know one lighthouse from another.

And this is what we have come to in the 19th century,—wantonly sacrificing a most obvious distinction between one light and another,—the *absolute duration of the phase*, and substituting a new one, derived from arithmetic or algebra! Was there ever greater nonsense? What notion of the exigencies of a sea life, or of life at all, can any one have who would displace an absolute distinction for a relative one? "It is a mad world my masters." Had such a document appeared in the middle of Bohemia, or some out of the way place, where people read about the sea, as we do about the moon, and where perhaps even Robinson Crusoe himself has not yet found his way, we should not have wondered at its betraying an utter want of adaptation to the necessities of the case, and to the thoughts and language of sailors. But that it should have been published, and by a recognized authority, in the maritime capital of the world, is positively a reflection on the nautical character of the country. The council of the Royal Society may, indeed, plead that *they* have never been at sea; but the East India Company have had large fleets, and therefore they ought to know better.

However, no practical man can doubt that the "reciprocating" pro-

perties, and the "ratios", will just "eventuate" in the simple fact that seamen will learn to know these lights, like all others, when they see them, and that they will not puzzle themselves about the description at all. The new light will, however, have this disadvantage, that, whereas seamen usually depend upon a light for telling them where they are, they will rather on first making a lighthouse of the new invented kind, depend on the supposed position of the ship as the most intelligible and least dangerous method of identifying the light. A state of things we opine that will somewhat impair its utility. Imagine that happy era arrived when the lights on Beachy Head, Dungeness, and Cape Grisnez, shall be distinguished by the ratios of the intervals!

Much of this may appear to some readers a mere joke, good, bad, or worse; but it really suggests serious considerations. Facts prove that we are liable to the introduction of new terms without the least regard to the question whether, if such terms are allowed their full swing, they will improve or ruin an established technical phraseology, the completeness of which for its purpose has been proved by its successful practice for ages without a single complaint (that any of us have ever heard of,) of equivoque or indistinctness, from the dullest or from the most speculative intelligence. Facts prove also that modes of distinction may be established by authority, which, not only from their abstruse nature can never be generally received, but are so perversely contrived as to render useless existing distinctions which, before, there could be no possible mistake about.

But alas! Scientific people (and we fear the same would be found to hold good of deserters to their ranks,) have no bowels for us, our objects, or our ignorance. That horrid lighthouse, which ever since we read about it has aggravated our constitutional nightmare with torturing episodes from the 5th book of Euclid, proves the fact. Those treatises and instructions, prepared professedly for the use of naval officers, which, instead of softening off the abrupt transition, or qualifying the merciless rigour of scientific phrase (as thus—"declination, called also, in the marine of this and other countries variation") avoid with contemptuous silence all allusion to existing synonymes in the language of an entire section of the community, and come down upon you like a sledge hammer, never stopping to say "with your leave", or "by your leave", but shove the whole marine vernacular slap-dash, on one side. All these prove the fact. The motto of philosophers is "*regnat scientia ruat Cœlum*". If a man was hungry, and the root of a cubic equation was a thing that could be eaten, the philosophers would proudly tender him one; but live distress or inconvenience is a quantity not homogeneous with their objects of pursuit. When people get "scientific" they care no more for us and our technical language than a physiologist does for giving the cramp to the miserable dog who is the victim of his cruel and uncalled for experiments,—or, than your *soi-disant* political economist, who does not concern himself a straw about any misery or confusion which might result from forcing a sudden change upon a people, for the sake of the mere experiment.

Victims of these caprices where are we to turn for redress? To the callous veterans of science we shall cry in vain. To candidates for

scientific fame, on the other hand, we fear that new terms, at once so easy and so "learned", will be too much for their self-denial—that instead of rejecting "declination" and "ratios", *instanter*, they will receive and appropriate them with humility and satisfaction, like the robes put upon their guests by eastern potentates to hide their rags, and make them fit for the company of their betters. It is to those only who have attained to rule or direction in matters bearing on professional usages and taste that we can look. We trust, therefore, that the Lords of the Admiralty, secluded by their rank and position from the prevailing epidemic of scientific verbosity, will withhold the weight of their authority from the merciless infliction on the Service of such a long-shore term as "magnetic declination" instead of variation. We trust too that they will instruct their engineers, wherever they may please to search for new distinctions in lights, to avoid Algebra and the differential calculus as they would a mad dog; and we hope that the Hydrographer, whose conduct and example must have the greatest influence in matters of this kind, will steadily oppose all such objectless innovations; and that he will be ready to administer a damper, whenever the occasion requires, to the ridiculous sallies of a spurious scientific enthusiasm.

Fragments from the Dardanelles.

(Continued from p. 365.)

October 5th.—This morning the northerly wind still continuing, we deferred visiting any of the villages, and determined to give the town of Tchanak Kalessi the preference. We therefore breakfasted early, left the ship about 7 A.M., in a four-oared gig, and arrived at our destination at 8h. 30m. A.M , taking nearly an hour and a half to row a couple of leagues. The current was of course the chief cause of our not making more rapid progress. Keeping the Asiatic shore close on board, we had every variety of shipping on our larboard hand, and on the starboard side wound a sandy road within pistol shot, along which laden camels, horses, mules, and asses were continually proceeding under the guidance of the country-folks towards the town we were ourselves about to visit, where it happened to be the weekly market-day (Wednesday). The groups formed by these people (clad in every variety of Turkish costume) as they watered their cattle at the square-built fountains by the road side were very interesting. Many of the men were armed. We chanced to fall in with the Consul's Dragoman, who was riding down to Mr. Landers, and so shoal was it in this part of the Strait that, when we had approached him as near as we could, he still had to take up a position in the stream to converse with us without bawling to make himself heard.

Cacoucho is as well known to frequenters of the Dardanelles by the inappropriate name of "Jacob," as by his legitimate appellation. He told us that some pirates had been at work in the Straits as recently

as the 10th ult., regretted he could not return with us to the Castles, but said we should find a Tchaoush somewhere among the ruins of the Consulate, who, knowing Italian, would accompany us during our purchases, and sufficiently supply his own absence. Then striking his shovel-stirrups against the sides of his frisky steed he rode on his way, smiling at our giving him the *salaam aleikoum* in the most approved style of frank pronunciation.

Resuming our course, many a *boonar* or spring was seen close upon the water's edge, bubbling up out of the beach and sands; of some of these we tasted and found them perfectly fresh and good; much game also rose within shot; and shoals of fish occasionally passed near us.

Off Barber's Point there are extensive flats to which a good berth must be given even in a boat; on this part of the shore there is a small house, and the turf is thrown up into the form of a battery, where about twenty guns might be placed but there are none on the spot at present. Rounding Barber's Point a bay is reached, above which a small river runs into the Strait, covered with ducks and geese, and forming apparently the chief rendezvous of all the washerwomen in the neighbourhood. In winter I am told this becomes a furious stream.

Immediately to the north of this river rises the Castle of Tchanak Kalessi, the inner or old Castle of Asia. Pulling close under its guns, we saw groups of the *top-tchees* (artillerymen) sitting cross-legged between them, eating their morning meal, each group forming a circle, and resembling schoolboys playing at "hunt the slipper". The majority of them were not twenty years of age. They wore short blue jackets, and white cross-belts, and the Fez instead of Turbans.

Above the Castle there was an immense space covered with ruins, occasioned by the terrific fire which two months since destroyed in three hours all the Consulates—except the Russian—as well as 150 houses and 187 shops, and the Pasha's Palace.

On these ruins tents were now pitched in which a brisk trade was driving, in fish, vegetables, fruits, and poultry; and a solitary baker's, whose oven (*furoun*) having been so long accustomed to fire had resisted the conflagration which had burnt down everything around him except a minaret, was surrounded by crowds purchasing his loaves of *eckmeck*. On the north bastion of the Castle overlooking these ruins, an animated conversation, if we may ever judge from gesture and action, was going on between some Turkish Officers of the Nizam Djedid relative to the Russian man-of-war schooner, previously alluded to, which thus early in the morning was again attempting to beat past the fortifications, that, one in Asia and the other in Europe, are here not a mile distant from each other. In this she at last had the good fortune to succeed.

It is probable that the current is rather slack in the morning, and increases in strength as the day advances. After sunset it very frequently becomes weaker, and there is a perceptible increase in the depth of water near Tchanak Kalessi. But no vessel is permitted to pass this point after sunset, and an infringement of this rule inevitably brings a ball or two about your ears, a Turkish custom sometimes imitated in the daytime at Tariffa in the Straits of Gibraltar.

A few days since a Yankee gave the "Maria Dorothea," steamer, eighty dollars to be towed ten miles. Thus she got past the dreaded

Castles, but the steamer had great difficulty in making head against the current, with the "cargo of notions" she had taken in tow.

We landed at a platform connected with the English Consulate, close to which there is an oyster bed, found our Tchaoush, and, business before pleasure, made our way through the remains of a street at right angles to the shore, to the shop of the *Kassab* or butcher of the place. We found this worthy seated on a table, at the upper end of his *dookyan* or shop, smoking a pipe a fathom in length. He handed this *tchibook* to one of our party, who soon added a cloud or two of smoke to the volumes already floating among the cobwebs which hung from the roof of the room, and which for size and appearance would do honor to an English wine-cellar. The kassab noted down our wants with his reed-pen, writing from right to left on his knee; and calling out "beer ko-yoon!" A sheep was immediately brought to the front of the shop, (which by-the-bye is a corner house), three of his legs tied together, his head held over a small well, and his throat cut, the blood falling not on the floor but into the well; his head was next taken off to be sold for baking, then his skin disappeared, his internals followed; and at last, when thus prepared, the weight was taken by a sort of steelyard.

During these operations the street-dogs almost emptied the little well of its warm contents! After paying twenty piastres for our purchase, which weighed 35 lbs. English, it was sent down to the boat by a Turkish *Hammal*, or porter, unattended. There was no fear of his running away with his burden. The *lower orders* of the Turks are honest to the very highest degree.

We next, leaving Tchaoush *en bas*, called on Signor Nicholas Vitalis, the Greek Consul, who shewed us a despatch, stating, that 600 persons were dying daily at Constantinople of plague. This gentleman also gave us pipes, preserves, (*Bishneh*,) iced-water, and coffee. This hospitality is offered on almost every visit in these parts.

The late fire has destroyed all the wine stores. We however succeeded in getting a cask *vice* English butter exchanged in barter. Visiting the potteries near the windmills above the town, I bought three green vases, seven *outré* plates, and two jugs for twenty pence English. The shape of the vases is elegant.

[An English workman who chanced to see them in London has, at his own request, copied the pattern, which, after all, is but a very common shape in the Dardanelles.]

Tchanak Kalessi takes its name from the Potteries, tchanak signifying earthenware, or crockery. Some one has translated the name of this place into Pot Castle. Our supply of fowls we got from a female higgler, closely muffled up, in all but one eye; and we got our vegetables, (and some pods of cotton as specimens) from the garden of a Greek outside the town. Before entering this garden we passed through a large room in which was a high wine-press, the top of which we reached by a ladder, and found a Greek inside stamping with naked feet upon cart-loads of grapes with which he was being supplied by men whose wicker *arabahs*, filled with this luscious fruit and *horsed by buffaloes*, were at the door. In other parts of the town oxen and horses, asses, and mules, were employed on the same Bacchanalian service. The

streets are here very narrow and the paving horribly bad, where there is any at all. Grapes are now hanging across many of the thoroughfares, the bunches dangling between the planks which temporarily extend from house to house, and quite within reach of the numerous passengers and camels plodding by. But the *deveh* seems to disregard what the man never seems to be glutted with on first getting ashore in this beautiful clime. A wistful eye at a passing *arabah* led to a Turk's instantly handing us a bunch or two of its contents. The native word for grape is *oozoom*. We had the pleasure of returning this civility to one of the "Faithful" by taking him down in our boat to his little schooner (laden chock-full of figs strung on straws and reeds,) moored just above Barber's Point.

October 6th, Thursday.—In returning yesterday from the Castles, we were nearly capsized owing to the current and swell over the shoals near Barbers Point—the boat being heavily laden with provisions,—and the northerly breeze so strong that we could only carry her fore and-aft-foresail. To-day at noon it blew a gale—these Etesians are determined to tease us. The French brig-of-war veered cable, and struck top-gallant yards and masts; we also veered and a schooner to leeward let go a second anchor and subsequently a third. It has been too rough to go ashore to-day, except *ex necessitate*, although almost within a stone's throw of the land. A schooner on our larboard bow drifted, and succeeded in bringing up again lower down; but a brig drove out into the Ægæan from her anchorage at the entrance of the Straits, above the New Castles. She made sail for the Asiatic shore, but could not get in again. We ourselves rode well at single anchor, with 75 fathoms of chain.

A schooner within hail of us imprudently sent her boat ashore before noon, and notwithstanding the desperate efforts of the crew to get on board again, they were driven half a mile to leeward, and obliged to hang on to a Greek brig for six hours. A beef-cask and hawser was ultimately floated as near to them as possible, which by making a regular regatta-effort they succeeded in clutching and by these means they rejoined their vessel. No one can have an idea of the great strength of the Dardanelles current till he has pulled against it in a northerly breeze.

October 7th.—This is our fourth day of anchorage here. Nearly all the vessels have drifted a little, under the gale, but we still hold on, hoping the wind may, when it does shift, not fly to the westward, as we have discovered shoal water between us and the shore. To tail in hereabouts would not be over pleasant, though while the wind holds in its present quarter, we ride far better than our neighbours.

At sunset the weather moderated, and we went ashore. Saw several wells, about a foot deep, close to the beach, where excellent water may be obtained in some quantity. In our walk we stood northwards, passed through a great deal of wheat, growing on a sandy and stony soil, intermixed with weeds and stubble stronger almost than any I have ever previously seen, strong enough to trip up a horse.

There is no maintained road here, but a mere track passing generally over or in sight of the beach. A caik was loading sawed planks which mules brought down to her. The planks were lashed to their backs

diagonally, one end nearly on the ground, and the other high in air, one end almost touching their hind heels, and the other a foot or two over their heads. At a stone-building some seven feet high, behind which there is a well, we fell in with a group of fishermen, without any fish, but having a goat, and two of Pharoah's lean kine for sale not good enough for ship's use, or suitable to our taste. These fellows were mightily pleased with the present of a common English knife, and permission to look through our spy-glasses. Close to their hut stakes were driven into the sea, forming two sides of a square, the land forming the third side, and the fourth being open and facing the current. The downward stream had not this evening yet filled their nets which were made in three parts, the two outer being composed of large meshes, and the middle small. The sides of these three nets were all lashed together. Within the hut a man was lying at length, cooking their supper, with his face near a roaring fire. We forebore further intrusion and returned on board. A small trawl would be very useful to Merchant vessels in the Dardanelles.

October 8th.—Saturday, wind still contrary, but weather more moderate. Dressed the ship in our signal flags,—Maria Dorothea, Austrian steamer, passed up from Smyrna; we boarded the Hellespont brig, 176 tons, Capt. Longridge, lying about a mile below us, and got the doctor of the Argus (French) to dress the Captain's leg, seriously injured recently at Milo; found the master of the Monmouth (Adams) detailing his quarrel with the Genoese crew of the Sacra Familia who had got possession of his anchor, which however, the Hind, man-of-war cutter, in a day or two recovered for him, and "last not least" we now learnt that the Hellespont (which we had passed on Tuesday last at anchor near Cape Greco, six miles from our present berth) had on the following night at 9 P.M., (Oct. 5th, 1836,) been boarded and plundered by pirates!* Two of her crew were wounded.

Sunday, Oct. 9th.—Wind more moderate, but still contrary. Again rowed up to Tchanak Kalessi and this day we were attended, not by the Tchaoush, but by Kakoucho himself. He informed us that the Governor of the Hellespont, Mehamet Pasha, had heard of the piracy on board Capt. Longridge's vessel, and that he was using strenuous exertions to discover the culprits in this case, as well as in that of the 10th ult. which occurred off Cape Yenicher, immediately opposite to the spot where the *Hellespont* was plundered, and which terminated less fortunately since one of the crew lost his life. The ship's name I understood to be the Margaret.†

* This piracy is mentioned at length in "Words for the Windbound," p. 15. I may add that two children were on board, as well as two ladies, a circumstance which, fortunately, the pirates did not know. For other cases see the *Nautical Magazine*, p. 219, April, 1844.

† The Times of Tuesday, 9th April, 1844, contains the following paragraph which further proves that piracy is again, and even now in high fashion in the Mediterranean. This pirate is *bark-rigged*, the Santa Trinita is a *schooner*, the vessel off Malaga was a *brig*. Are there then in 1844, three Mediterranean pirates, or does one vessel occasionally change her rig as well as her station? The following is the paragraph from the *Times*.

"The Pirate of the Mediterranean.—There have on several occasions lately appeared some brief particulars respecting the daring depredations of a Greek pirat-

During this trip to Tchanak Kalessi, we visited a synagogue, Greek church, mosque, and a bath, which last quite bore out Capt. Frankland's description in his "Travels in Turkey," (vol. 1. p. 249,) which work we have on board. Strolling along between the consulate and the fortress, we saw Mehamet Pasha leave the Castle of Europe in a ten-oared barge, and land on a very small wooden jetty just above the Castle of Asia. He was attended by a telescope-bearer, sword-bearer, and other officers, was received by a group of the grandees of the garrison, and forthwith proceeded to inspect some of the new levy for the artillery of Stamboul. The Pasha was dressed in white European trowsers, a blue *surtout* and cloak, and a red fez, with the usual blue and bulky fringe tassel. One of this worthy's recent exploits was an order to fire at a fishing boat, at anchor on the opposite side of the strait. The stone shot happened to hit the mark, smashed the boat to atoms, but luckily the men in her were only two, and they both miraculously escaped unhurt. Mehamet,

ical vessel up the Mediterranean. Already have several foreign vessels been ransacked, and an English bark sunk by her, and that within the space of a very short time. From the descriptions given of this vessel by commanders of vessels who have either been plundered or chased by her, it is rather singular that none of Her Majesty's men-of-war have yet come athwart her. But her escape hitherto shows the ingenuity and deep deception she must be compelled to resort to, to elude the men-of-war; still it is somewhat surprising that she has not been taken. By a letter received at Lloyd's on Saturday from Malta, dated the 28th of March last, it appears that the Clipper, Captain Hammond, arrived there from Liverpool, had been chased by a suspicious-looking *bark* on the 2nd of that month, off Cape Passaro; and from certain circumstances attending the chase, the one in question, there is little doubt is that seen. In this instance, Captain Hammond states, that when first seen, she had her courses clewed up with her topsails on the cap, but upon his hauling to the wind, she immediately let fall her courses, hoisted her topsails, and set top-gallant-sails, and gave chase after him. He was compelled to tack three times, and only escaped upon several vessels heaving in sight. When first seen she was about a mile distant, by which Captain Hammond was enabled to note her appearance more particularly. She had a small heart painted white on her stern, shewed no boats, and from the rapidity of her movements must have been well manned. The chief of her depredations must have been between Cadiz and Gibraltar. It is satisfactory to know that Her Majesty's Government are acquainted with her depredations."

The above paragraph appeared in the *Times* of 9th April (1844). On the 29th of the same month, a second paragraph appeared which we subjoin.—"A letter received at Lloyd's from their agents at Malta, of the 15th inst., shows that this rover of the sea continues his lawless pursuit without hinderance or dread of detection. The many cases of recent piracy in the Mediterranean, attributed to a Greek bark, which has escaped the vigilance of the men-of-war up to the date of the following letter, call for very active measures for their suppression. The great injury which the shipping interest both at home and abroad has sustained by the repeated depredations of this pirate would ensure much *eclat* to him who may be fortunate enough to capture her. Certain it is, that the infamous but bold depredations, if not horrible butchery, of this vessel call for very prompt measures for her seizure:—"Malta, April 15.—We have already mentioned that a suspicious-looking vessel had been fallen in with, in the month of March, off Cape Passaro, by the Clipper, arrived at Smyrna. We now learn that two small craft, which sailed from the Sicilian ports on the same day for this port with specie have not reached their destination. One vessel has not been heard of, whilst the other has been picked up at sea abandoned, with the water casks emptied, and with other signs of having been plundered."

To the *Times* we are again indebted for a further notice of this indefatigable Buccaneer;—"This vessel, some particulars of whose recent depredations were given a day or two since, has again been seen up the Mediterranean, and although

proud of his *top-tchees'* skill, gave the poor fishermen a new craft, and did not appear to think he had put their lives in any danger by his experiment.

Walking near "White Cliffs" in the evening, we fell in with Mr. Longridge, Jun., who mentioned his suspicions that the pirates were some men, who on Tuesday, came on board the *Hellespont* to sell fruit, and who were then very prying, and eager to get down into the cabin. In their night attacks the ruffians generally succeed, as it is too much the fashion when at anchor in these parts, to keep but one hand on deck. There ought to be three of the crew at least and well armed. Before regaining the beach we met one Ibrahim Aga who made us understand he lived at the adjacent village, and produced a bundle of certificates, written by English masters whom he had furnished with supplies. His mule was carrying salt in one hamper, and raisins in the other, of which latter he gave us to eat. We got on board just as the evening gun was fired, and the drums of the French brig *Argus* were beating most boisterously. *Mem.* Plenty of *frogs* in this part of the strait, and *tortoises*, and innumerable coveys of red-legged *partridges*, which the Turks neither eat nor kill. The tortoises are greedily eaten by the Italian crews now in company. Wolves, wild boar, eagles, and wild buffaloes, afford good marks for the sportsman between Barber's Point and Boonar-bashy, near the Scamandar.

Monday, 10*th October*.—About noon to day a fair wind, but very light, sprung up, our friends of the *Argus* beat to quarters, loosed and set sail and shipped 10 sweeps, and a hundred vessels of all nations, rigs, and sizes got under weigh as fast as possible, nearly the whole of them also, had their boats ahead, towing. Every now and then it fell dead calm, and drifting and fouling to some extent was the consequence.

We ourselves started or lost nothing but a top-gallant-downhaul; got aground on the European side for a few minutes, but carrying out a kedge easily hove off; nearly lost our mainboom from a flaw which brought up a vessel astern into sudden and unwelcome contact; and finding the current driving us again into shoal water, anchored. Just before sunset the breeze freshened, and we reached and anchored in a

the vessel she chased was enabled to effect her escape, it still shows that her abominable trade is carried on in the very teeth, as it were, of Her Majesty's men-of-war. By a letter received from Paris, dated the 9th May, it appears that the Jean Baptiste, Martin, from Cette, and at Havre on the 24th ult., was obliged to take shelter under the Island of Ivica, and while lying there, towards midnight, he perceived a brig, painted black, which he supposed to be either a Greek, or a Turkish vessel, with all sails set. When arrived nearly opposite the Jean Baptiste, she clewed up her lower sails, hauled down her fore-top-sail and rounded to. The Jean Baptiste tacked about, but the suspicious brig did the same, and prepared to put her boat out; perceiving which, the Jean Baptiste made all sail to run out to sea; the strange brig did the same, but the sea running very high, she tacked, and remained with her top-sails close-reefed. It will be remembered that in the recent account given under this head, the suspicious vessel is represented as being a bark, whilst, in the present instance, the strange sail is mentioned as being a brig—a widely different rig it is true, but may have been resorted to as a *ruse* to escape detection—a kind of deception known to have been practiced in former years by pirates; but if this supposition be incorrect, it then remains that there is more than one piratical vessel in those waters, and calls therefore for increased diligence upon the part of Her Majesty's cruisers. Surely the depredations of these rovers will not be permitted to extend much further."

bay, below the old Castle of Europe, and spent the evening on board the *Brisk*, which was lying some little distance ahead of us.

This afternoon a splendid double-banked French frigate, painted ports, *Rouge et Noir*, with a broad pendant came down the Dardanelles, and saluted the Turkish flag, (red, with white crescent and white star,) which was returned in bad time, by the guns of Tchanak Kalessi. The Argus also saluted her countryman, and in a very slovenly manner.

Tuesday, 11*th October*.—Wind again contrary, fine weather and calm. Spoke the Maria Dorothea, steamer, for the third time since our detention here. We have not sailed nine miles in nine days, during which she has twice visited both Constantinople and Smyrna.

Five of us landed in the bay, and found an excellent watering place, built of stone, with a square stone-basin below it, and surrounded with a beautiful group of trees. A rough road winds along this part of the European shore, the chief traffic on which has consisted to-day of grape or wood-laden donkeys. Hills rise from this beach to some height and distance covered with firs, pines, planes, cypress, and fruit trees; on the left of this watering-place or fontana, there is a fine valley and a second watering-place.

We scrambled along the right of the valley, saw plenty of figs, grapes, and olives, and cotton-plants, which last a man's hat could, in most cases, have covered. We uprooted one to bring on board, which the jabbering of some Turkish field-labourers prevented. Striking into a rugged path bordered by trees in luxuriant foliage we marched on northwards along the heights towards the Inner Castles, with verdant declivities on our right, and the crowded Dardanelles winding below us. The view was splendid, but the screams of two unveiled women, and some children suddenly informed us we were considered trespassers, and hearing shouts uttered by some turbaned gentlemen close to us, we were unaccountably seized with a panic, rushed past a very neat little dwelling, wore round, and repassed it on sighting certain Othellos, and made a regular steeple-chase race down to the beach, where we all laughed heartily at our cowardice. From the watering-place we hailed a boat and returned on board.

In the afternoon a light air enabled us to stand across again to the Asiatic shore, and here we have brought up *above* Barber's Point; a Turkish man-of-war barque astern of us, and a Greek schooner filled with soldiers ahead, who, at 7 P.M. were inspected by a dashing military officer in a double-banked ten-oared barge from the Asiatic Castle, which bears N. ¾ E., from our present berth, distant about two miles. On the hills northward of the town, half way up the ascent, and on our larboard bow, is an encampment of green tents. We are completely surrounded by merchantmen; a fine steamer has passed up this evening, and a beautiful man-of-war cutter under Russian colours gone down. H.M. cutter *Hind* and ourselves have merely changed anchorages to-day in our fruitless endeavour to pass the Castles; she having left the Asiatic shore for the European, and we the European for the Asiatic. Such are the daily incidents and disappointments in the Dardanelles, where a steam tug might prove a good speculation.

Wednesday, October 12th.—Sent a boat to Tchanak Kalessi and the men came back wondering how it was that melons are here as cheap as cabbages, nearly three pounds of either costing but one halfpenny English! Twelve pounds of onions (*soghan*) for one piastre or two-pence halfpenny! News having arrived from the Capital that there has been no rain for eight months, and that water is sixpence the skin, we despatched the long-boat to the adjacent sandy beach, and at a fontana, a few fathoms inland filled up some of our casks. Some Italian sailors who were smoking cigars, carelessly set the furze on fire, which a gang of Turkish tars extinguished.

This fontana has but one spout to its three troughs, and watering is slow work, especially as one ship takes all she requires before a second takes a drop. *Su* is the Turkish word for water.

Thursday, October 13th.—Contrary wind still continuing, we warped the ship a mile ahead, but brought up on shoaling our water and feeling the current increasing. Landed and walked into the town. Passed two stone shot which, more than twenty-five inches in diameter, had fallen here from the European batteries. Forded the river; stream at this season wide and shallow; bought a large turkey for eighteen-pence; in repassing the river lost a shoe, and ran a thorn deep into my foot, which during a mile's walk occasioned great pain, festered in the night, and was cut out next day.

At the very moment we got on board a breeze came off the land and lasted exactly long enough to take us up to the Asiatic Castle, *off the northernmost bastion of which, in fifteen fathoms, and within hail of the sentinel, we anchored.* One brigantine, the *James and Jane*, succeeded in getting within half a mile astern of our berth, and so did a Turkish caik and a Danish cutter, but no other craft whatever happened to be so lucky as ourselves. The *Hind* tried, and from her position failed. Just at sunset, we obtained the assistance of the Captain of the Port, and six Turks, and warped up to the English Consulate, off which "fragment of a house," we anchored just as the minaret-galleries of the mosques of Tchanak Kalessi were being illuminated, it now being, we believe, the sacred Fast of Ramazan.

Having at last got above this the most narrow part of the Dardanelles, we anticipate no great difficulty in reaching Constantinople, even though the wind may continue northerly. Tchanak Kaleh (or Kalessi,) affords to the windbound no amusement whatever in the evenings, except such as may be derived from mixing with the European Consuls. The British Consul himself, is eight miles off; his town residence indeed, is close to us, but without a roof, or second room, the recent fire having destroyed everything but the walls of his ground floor; the Turks themselves retire early to rest, have, of course no theatre here, nor have they any coffee-house open after dusk, or at all events rather later; the dogs and the police have, therefore, the streets to themselves; and we must make ourselves as merry as we can on board, and thank our stars we are as well off as we are. The fleet below "the Castles" would gladly be here at "any price." They may stick where they are for weeks to come.

In the day time Tchanak Kalessi is bustling enough, and since the present Diary was penned the Author of *Oriental Outlines* has found

it amusing enough at other seasons. Speaking of this place, he says, in words which I may use, to wind up this present contribution to the *Nautical Magazine* that, "the circumstance of there being no Inn at Tchanak Kalessi scarcely affects an Englishman, Cacoucho Russo, the dragoman to the British Consul having sufficient accommodation for a small party. I have lodged for twenty-two days in his house, where I experienced the greatest attention, and ever dined *à la Turque*, seated on a sofa or a carpet, having instead of a mahogany table, the circular *sini* of tin or pewter; and at night I occupied a bed on the floor, the Brusa coverlets of which were well wadded with the softest cotton, encased in crimson silk, and elegantly embroidered with gold. I visited several Hebrew families on the introduction of the dragoman; in the evenings played the new game of *Tchelenden*, and was amused with the almost interminable tales of "Dindar and the Dervish," and "how the sea first became salt."

So that it appears—and among others Messrs. Slade and Fellows add their testimony to his services—that a man consigned to the care of Cacoucho may do well enough for a time, even in such an Asiatic *Ville d' Ennui* as Tchanak Kalessi in the Dardanelles. This place in the present June and July (1844) is quite on the *qui vive*, owing to the visit of his Highness the Sultan, Abd-ul-Medjid, the youthful successor of Mahmoud the Reformer.

(To be continued.)

On Rating Chronometers.—*By Lieut. Ryder, R.N.*

Sir.—I well remember some years since hearing that Sir Edward Belcher, in rating his chronometers, availed himself of some plan of his own, for, the expression was, "rating them among themselves, giving each chronometer a numerical character," but I never, although diligent in my enquiries, could obtain any more explicit account of the method used. Surely some one of your readers, has sailed with that officer, and could enlighten others less fortunate, with the desired information. When as a youngster attached to a surveying ship, it was part of my duty to make the fair copy of the comparison book, it often occurred to me that a great deal of time was taken up every day in comparing the chronometers, writing down the comparisons, arranging them, filling up columns of first and second differences; which except on the day for taking sights were never of any use except to detect the presence (not the amount) of any sudden alteration in a watch's rate; at least, such, was my impression.

No doubt the rates on leaving port were corrected on gaining a second rate, by Captain Owen's method; but this might be done without any knowlege of intermediate comparisons, second differences, &c. My attention having being turned within the last few months to that very interesting subject, the measurement of Meridian distances, it appears

to me that the column of second differences may be made of much greater use, than at least I have ever heard or read of.

No one will I trust suppose that I have the presumption to imagine that I have discovered any new feature in a subject which has been so ably treated by authors too numerous to name, and particularly by Lieut. Raper in the *Nautical Magazine*. I feel convinced that either I am in error, or if there is any truth in my idea, it has been mentioned or alluded to in some book to which I have been unable to refer. My reason for writing then is more to obtain than to give information. I hope to elicit a reply from the officer I have mentioned above, to whom I am already so much indebted.

The column of second differences registers the sum or difference of the *actual* rates (not the assumed daily rates) of the two watches compared together. If then the contents of this column for a certain time be added together, the sum will be the sum or difference of the *accumulated rates* of the two watches, the sum, therefore of the two quantities we so much wish to know, taking cognizance of all the variations of the watches during the interval. If we could discover the law by which to divide this quantity, our grand object would be gained, but this is evidentally impossible; but surely, the knowledge of the *sum* of the *true acc. rates* may be made of some use, may prove of some assistance in approximating towards their real value in correcting their assumed rates. It is the assistance that may be derived from this source that my want of information on the subject leads me to suppose is generally neglected.

Let us suppose that we have an assumed acc. rate of one chron. (1) $= a$
and " " another (2) $= b$
These we will suppose to have been corrected by Capt. Owen's method of allowances.

We have also the *sum* of the *true acc. rates* from the column of second differences, which we will call $= c = a' + b'$, if a' & b' represent the true acc. rates.

Now, let $a + b = 230s$ and $c = 252s$, then as the value of a & b depends to a certain extent on assumptions, whereas the value of c is certain, there must be in a or in b or divided between them an error of $22s$, which would otherwise have been neglected. Taking all probabilities into consideration, it will be fairest to divide this error in equal proportions between the two assumed acc. rates, by which means we shall obtain not certainly a' & b', but quantites nearer to them, probably, than a & b are.

These may be called the corrected assumed acc. rates, and will be different for every couple of chronometers.

Each couple will, therefore, give two meridian distances, four chronometers give six couples, and twelve mer. distances. The mean of these will, I submit be probably nearer to the truth than the mean of the four original mer. distances. Now, I readily grant that this correction will take no cognizance of equal alterations of two watches in the same direction. If the alteration is a permanent one, Capt. Owen's method will allow for it to a certain extent. The usual method appears to judge of the behaviour of a watch from observations made during short intervals at the commencement and termination of its career, while the

above correction affords some slight additional evidence to its character during the voyage.

On the blue cover of this *Magazine*, Mr. Dent gives us the *actual* daily rates of six chronometers. This has afforded me great facilities for trying the correction. I have done so with two or three couples, and have found the corrected assumed acc. rate always nearer the truth than those merely assumed. To make them correspond to examples in practice, I have used the first and last weeks of a month, as rating intervals, &c.

I might have said more on this subject, been more explanatory, anticipated objections, and finally given the work of Dent's rates, (anybody interested can try this,) but I am afraid of occupying too much space.

Regarding Lieut. Raper, as my instructor in the measurement of the mer. distances, I trust he will condescend to explain and correct the errors of his pupil.

I am, &c.,

A. RYDER,
Lieutenant R.N.

NAUTICAL RAMBLES.—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Association.

(Continued from p. 805. vol. for 1843.)

SEVERAL gallant actions on a *small scale* were performed on the station, which on that account were cast into the shade, and soon forgotten among the many brilliant achievements elsewhere. We may, perhaps, be permitted the pleasure of briefly mentioning some of these, as being creditable to the performers, and honourable to the country.

Midshipman Bowler of H.M.S. *Swift*, of 16 guns, Captain Wright, was serving *pro. tem.* with Lieut. Smith, in a tender schooner, called the *Mary Ann*. This vessel was sent to cruize off Truxillo, (the Swift being stationed at Honduras,) for the purpose of intercepting a privateer, which had captured the Colonial schooner, *Admiral Duckworth*. It was desirable to look into the above-named Spanish Port to determine whether the vessel they were in quest of had sailed, or was still in harbour. For this purpose two small boats were manned and armed, one under the charge of Boatswain Walker, and the other commanded by the Mid named, who had with him only four lads, the whole, including the officer, being under *eighteen years of age!* What could be expected of such striplings? We shall see presently how they acquitted themselves.

After night-fall the boats shoved off, at some distance from the port, for the understood object of reconnoitring; for nothing more could be expected from such slender means. When they had come near enough to make out the vessels, the boats separated; the boatswain having directions to pull in shore and examine the craft lying nearest the town; and the Mid those which were anchored further out. In exceeding these orders, the latter officer being deceived by the darkness, found

himself close to a large armed schooner, and it became sufficiently evident to him, from the noise and bustle on board of her, that the boat was discovered.

There was no time for deliberation; whatever was to be done, must be performed with promptitude, the youthful officer determined with the characteristic readiness of his profession, to take the "bull by the horns." Directing the lads to give way, and boat the oars, he was was soon alongside, and was saluted with a discharge from one of the guns of the schooner, the shot from which shattered their little boat, which sunk under them! Here was a crisis falling like a thunder-bolt upon them at the onset; retreat, had they understood the force of the term, or the caution which the unusual energy of the Dons intended they should understand by the bright flash, and the rattling sound and effect that followed, was out of the question. But one *ultimo ratio* remained, it was that which our tars liked best; and, in a second it was embraced, and the gallant *five* were, strong in that indomitable spirit belonging to the boys of the ocean isle, engaged hand to hand on the schooner's deck with nearly *four times* their number of athletic marineros. The business, however, was soon settled in the usual fashion, and the Spaniards who survived, driven below; the sails loosed, and set, the cable cut, and the fine craft standing out!

The capture proved to be the privateer, Coridad Perfecta, coppered, and pierced for sixteen guns, but mounting twelve; and having on board at the time, fifteen men; the rest of the crew being on shore. We perceive now, whatever may have been expected, how these five lads performed their duty; and I think it will be admitted that, although very many daring acts of gallantry were achieved during the war, few surpassed this for promptitude and intrepidity, by actors so young.

The Mid was promoted when he had completed his six years servitude, and subsequently served as a lieutenant in the *Nisus* frigate on the Cape of Good Hope station. What became of him afterwards I do not know. He was a native of the "Emerald Isle," well informed, and rather a clever youth.

The following amusing anecdote relates to him: subsequently to his dashing exploit, he joined another ship, and whilst serving in her, was ordered to take charge of a Spanish schooner, which had been captured. Whilst overhauling the cabin of the prize, which was lying alongside of the ship, he hit upon a basket of eggs, fine large eggs. With a generosity not always exercised by a hungry Mid, he immediately sent them all up as a present to the Captain, who appeared equally pleased with the act, as with the valuable contents of the basket, and, no doubt, in anticipation, thought of the savory omelette, seasoned with dried thyme, &c., for this dish is an especial favourite of the sea captain. It happened however, in the course of a short time, that an another act of the thoughtless Mid, gave displeasure to his commander, who, losing all recollection, at the moment of irritation, of the spontaneous, (and, for a reefer, most disinterested) and considerate deed of his youthful subordinate, directed that he should be superceded.

In a short time however, the indignant chief bethought him of the eggs, which, whatever may have been the anticipations entertained of

their value, it would have been beneath his dignity to retain them and his anger too; the relative force of the two principles, philosophically considered, being antagonist, consequently the dire result was, that the steward was directed to return them to the donor, without a word.

To the unhappy Mid, so quickly deprived of his new authority, there needed no explanation, the sight of the basket was enough, for

> "He smitten by the wasting blight,
> Exclaim'd that man was made to mourn."

The rest of the Mids were uproarious in their display of the pleasure they felt at the thought of having so unexpectedly tumbled into such good fortune. The unfortunate offender, though evidently depressed in spirits, had borne the censure for the trifling fault committed, with becoming firmness and humility; but being rather a sensitive lad, this fresh, or rather additional proof of displeasure, affected him considerably, and no doubt he thought with the Lady bard of Somerset, that

> "Since trifles make the sum of human things,
> And half our misery from our foibles springs,
> Since life's best joys consist in peace and ease,
> And few can love or serve but all may please.
> Oh! let the ungentle spirit learn from hence,
> A small unkindness is a great offence.
> Large bounties to bestow we wish in vain,
> But all may shun the guilt of giving pain."

As a matter of course to remedy in some measure the oppression upon the mind of their messmate, it became the anxious desire of the *considerate* fry of the mess, to dispel *his* sorrow; to effect which, antidotally, a bowl of egg flip was recommended, *una voce*. Instant preparations were, therefore made, and all being soon in readiness, the first shell was cracked, when lo! out dropped—not a yolk—but a little four-footed thing very like a lizard! Amazement was apparent in all the surrounding eager countenances, but the unlooked for disappointment had no power to suppress the roars of laughter which followed the extraordinary spectacle. The "fine large eggs" were those of an alligator. "Crocodiles' tears" are said to be a very common thing in the wide world, but the ungenerous liquor of "Alligator punch" is assuredly a rarity!

The event when it became known to the displeased chief, who, happily, was not an unrelenting one, had the effect of a sedative; softening his ire into harmonious good humour. There is an adage current, applicable to the general conduct in human affairs, which, if we understand it rightly, means simply, that mortals are not gifted with prescience, and this for a very wise purpose: "A man does not know whether he is going too fast or too slow." It happens often that events, which at the instant appear as misfortunes, turn out ultimately to be blessings. We have somewhere read a long dissertation on this head, by a Hermit, who showed by many examples its truth; but where is the man who has lived half a century—nay, much less than that, who needs other proofs than those which his own life supplies? The sequel will sufficiently explain that a trifling circumstance saved the gallant Mid, our hero, from a great deal of anxiety and trouble.

The Schooner took her departure for Port Royal from the ship

cruising in the Florida Channel, but she never arrived there. Nine months elapsed before any tidings came of her fate: when one day to the agreeable surprise of his shipmates, who despaired of ever seeing him again, the long-lost Mid the prize-master, and his men, came along-side; having just returned from Campeche in a cartel. It appeared that the Schooner sprung a leak when she had reached as far as the edge of the Catouch Bank, and settled nearly to the waters' edge, but did not sink, probably from a buoyant property in some part of the cargo. To beat up to Jamaica, in such a condition, was of course out of the question, and it being equally out of their power, with a water-logged vessel to reach Honduras, the nearest British settlement; the most obvious course for saving their lives was adopted, that of running for Campeche.

The sufferings of the young officer and the men under his charge, were not very light, as may be supposed from the unfortunate state of the vessel. The only liquid which could be got at, proved to be *Hollands*, which, of course, did not assuage their thirst, but as they could not exist without water, they landed a party upon the coast, who were fortunate enough to obtain a supply. The heat, however, was so oppressive, the wind being light, and having recovered but little food, that their prospects were not very cheering; but after a protracted endurance of their miseries, providentially arrived in the Bay of Campeche, and became prisoners of war to the Spaniards, instead of prey for the sharks or vultures.

During the whole period of the war, the privateers were not only numerous but extremely audacious; on the southern side, and western end of Jamaica they were very troublesome; often standing in towards Bluefield's Bay, and South Negril, chasing and frequently capturing the droghers, and even the fishing canoes. One of these vessels in particular attracted attention, by the boldness with which she approached the shore, intercepting the small vessels and alarming the ladies.

The Captains of the West India ships which were at anchor at Savana-la-mar, determined, if possible, to stop the career of this impudent picaroon by a *ruse;* for, having no vessel that sailed sufficiently fleet to promise a chance of success in a fair daylight chase, it was of no use making the attempt openly.

For this purpose, a number of volunteer seamen under the command of a very gallant man, Captain Samuel Gardner* of Bristol,—repaired on board of a sloop, concealing themselves under hatches, and sailed out in the evening. At day-light the next morning, as was anticipated, they descried the privateer in the offing plying her sweeps. It was calm at this time, and the little ambuscade vessel lay motionless. "Ah!" thought the hitherto successful Rover, no doubt "I shall soon have you in my clutches!" But, for once, with all his cunning, he had reckoned "without his host."

Before the sea-breeze set in, the privateer had ranged up alongside of the apparently, helpless little sloop, and the crew were allowed quietly to lash their vessel to her. When this was done, the noble leader, who had personated the skipper of the drogher, with a broad-brimmed straw

* His family was from Staffordshire.

hat, and comfortable pea-jacket, at once threw off the disguise, sounded the concerted signal, when up sprang the ready and eager tars, accompanying their alert movement with one of those astounding and withering huzzas that, momentarily, palsies the heart of the Frenchman, and to work they went in the true John Bull style. In five minutes the privateer was their own! This was carrying the point *tout-à-coup* with a vengeance; and, no doubt the astonished picaroon who had not been accustomed hitherto to such quick work, thought so too.

As soon as the sea-breeze made, the prize was brought into port in triumph, amid the acclamations of the assembled multitude that had come forth to greet the gallant fellows who had accomplished this neat and dashing little affair.

I do not know whether the daring seaman who conducted this enterprise, ever received any honorary reward from the inhabitants of Westmoreland, from the shipowners, or from the Patriotic Fund, but he unquestionably deserved some testimonials for his brave conduct on the occasion.

In the early part of the war a very spirited action was fought by another Bristolian—Captain Baker, (a brother of Lieutenant J. Baker, R,N., and uncle to Captain J. Baker, H. E. I. C. S.) of the Jamaica ship Cæsar; who having, with four others, been separated from their convoy, was chosen by them to be their Commodore. They were subsequently attacked by a French ship of thirty guns, which the Cæsar closely engaged and beat off; and successfully conducted her charge into port. For his gallantry on the occasion, Captain Baker was presented with a piece of plate; and the affair was commemorated by the celebrated Marine Artist, Captain N. Pocock, who was also a Bristolian, and a near relation of the Baronet of that name. Another instance, rather novel, is related as having occurred in the Bristol Channel, which displays an ingenuity of recourse in a tar of the Old School that (as a *ruse*) must appear very amusing to our present gallant Blue-jacket. "Old Shaw" a well known eccentric skipper of a Jamaica ship, on entering the Channel at dusk, observed a suspicious sail edging down towards him. His vessel was pierced for eighteen or twenty guns, but had a few only mounted. To remedy the deficiency as far as show could do, the old seaman very deliberately ordered the carpenter to draw up the pumps, without delay, saw them into lengths, so as to represent guns, and place the pieces in readiness to be run out of the port-holes when he gave directions. To give effect to his scheme he directed a light in a lanthorn to be suspended over each port, and a man stationed at each in readiness to make the display at the same moment.

Thus prepared, when the darkness set in, he ran his ship close alongside of the Frenchman, a corvette of twenty-two guns—hauled up the hanging ports, showed his *formidable* row of "teeth", illumined by his by his battle lights; discharged a musket (which would not be a tell-tale, as one of his pop-guns would have been) over the enemy, and through his great war-trumpet roared out "Strike or I'll sink you!" The unexpected boldness of the manœuvre had its due effect; and extraordinary as it may appear, the astounded 'Croppos' instantly complied without an effort even to escape! In a few hours our old tar and his prize were safely anchored in Kingroad. Perhaps in the anecdotal

detail of maritime warfare there is scarcely one to be found more laughably piquant than this; and it is said that the oddity of the *ruse*, and the oddity of the character who performed it was upon a parallel.

(To be continued.)

The Archimedean Screw-Propeller.—*Trials of her Majesty's Steamer Rattler.*

Sir.—From the readiness with which you allowed me to correct some erroneous statement that appeared in a former number of your Journal, relative to the Archimedes, and the Screw-Propeller, I have been induced to lay before you some facts connected with the trials of the "Rattler", with the view of removing such unfavourable impressions as may have arisen in the minds of your readers upon the subject of Screw-Propelling, from a perusal of the paragraph that was copied into the April number of your Magazine, at page 251. The paragraph alluded to emanated from the *Morning Herald* of the 22nd of March last, stating that the result of the trials of the Screw in H.M.S. Rattler, had been such, that it was not likely that any other vessel in H.M. Service would be fitted on the same principle, and that she had lost a second screw. Now Sir, as the Editor of that Journal subsequently corrected the paragraph, in the most liberal and handsome manner, from information supplied by myself, together with what he had procured from Woolwich, I cannot do better than to hand you the enclosed article as it appeared in the *Herald* of the 9th ult.; to which I would add, that in a more recent trial of the Rattler with a two-threaded screw, her speed has been augmented to 9.830 knots an hour, being the mean result of 10 trials at the measured knot. Several of the trials on this occasion, exceeded 10 knots, but owing to the number of vessels beating up the river, the Rattler was at times necessarily diverted from a direct course, to avoid collision, which prolonged the time, and consequently reduced the average of her rate. I have adverted to this fact particularly that your readers may at once see the improbability of the Government abandoning a project that offers so many advantages for the service of the navy, since the question of speed has been so fully established in its favor.

With reference to an article at page 249 in the same number of your Journal, touching upon the right of claim to the right of discovery of the Screw as a Propeller, between England and France, I would observe that whatever the French may have done in discovering the principle, it is very certain that the Invention remained in its embryo state, (with them at least,) long after its success had been practically developed by my experiments in the Archimedes, in the years 1839 and 1840, during which time both the builder of the Napoleon, and the gentleman who constructed her machinery in England, were repeatedly on board, on which occasions every information was most freely communicated to them by myself and others connected with the vessel. Shortly after this time, the first French Screw Steamer, (Napoleon) was commenced at Havre, and however contradictory it may appear, she was first propelled by a 3 threaded *Screw that had been made for, and actually worked in the Archimedes at Bristol*, where a long series of experiments with all kinds of Screws had been made, in addition to those alluded to in 1839 and 40.

These, Sir, are facts which I believe the public generally are not in possession of, nor is it a pleasing duty on my part to publish them at this moment, but the barefaced insinuations of our boasting neighbours, and the manner in which they have to a certain extent been echoed by our countrymen at home, demand

that I should do so, not only in justice to myself, but to the credit of the country to which I have the honor to belong.

I am, Sir,

16, *Fish Street Hill*, Yours obediently,
25*th May*, 1844. F. P. Smith.

Mr. F. P. Smith, the well known inventor of the screw-propeller, the practical utility of which principle he demonstrated in his experiments in the Archimedes, has addressed a letter to the *Morning Herald* in reference to a paragraph in our paper of the 22d ult., stating "that the result of the experimental trials of the screw-propeller in her Majesty's steam-vessel Rattler, is such that it is not likely any other vessel in her Majesty's service will be propelled on that principle." Without impugning the accuracy of our correspondent's information as to the future intentions of the Admiralty on the result of the trials on board the Rattler, in the spirit of that impartiality to which Mr. Smith has appealed, we give the relevant points of that gentleman's letter, merely remarking that Mr. Smith is very much in error in thinking our correspondent's statement is "invidiously intended," as he must have seen, from the numerous paragraphs on the trials on board the Rattler, the experiments have invariably been reported as eliciting approbation.

Prefacing his letter by asserting that he deems it necessary to correct our correspondent's statement more with a view of disabusing the public opinion than from any permanent injury that can possibly accrue to the undertaking, Mr. Smith proceeds:—

"It is, I believe, pretty generally known that, in consequence of the success that attended my experiments in the Archimedes, the Lords Commissioners of the Admiralty have done me the honour of instituting a full and impartial inquiry into the merits of the screw-propeller, and the advantages that might be derived from its use in the British navy. With the view of doing this, so as to preclude the possibility of a doubt as to the result, it will be recollected that the Rattler was ordered to be constructed upon precisely the same lines as the Prometheus, and several other steamers of her size, on the paddle system, the engines to be of the same power, and the draught of water regulated to what is termed the 'sea trim' of that class of her Majesty's ships (11 feet 3 inches). This having been strictly done, a trial of the Prometheus was made at the measured distance, in Long Reach, on the 2nd of February last, and that of the Rattler on the following day. On this occasion their relative speed stood thus:—Prometheus, 8·757 knots; Rattler, 9·240 knots. Alterations have, however, since been made to the screw of the Rattler, which has increased her rate to 9·673 knots, being within a fraction of one knot in favour of the screw, although under circumstances most favourable to the paddle-wheel—viz., smooth water. It has been urged that the Prometheus laboured under some disadvantage from resistance offered by her masts and rigging. This I am bound to admit; but as the trials were made *alternately with and against* the wind, the resistance was very small as compared with her deficiency of speed.

"Then as regards the accident that befel the screw on two occasions, which your correspondent alludes to, without any explanation as to the probable cause, I will only observe, that in endeavouring to arrive practically at the best and most compact form of propeller, it was thought advisable, with the view of saving both time and expense, gradually to reduce in size those which had been already used, thus throwing a greater strain upon a smaller amount of surface than it was originally calculated to sustain, whereby a fracture might not unreasonably be expected, as was, indeed, the case by myself and the gentlemen conducting the experiments, it being in point of fact a part of their object to determine by actual experience the parts submitted to the greatest stress, so as to guide them to the most judicious disposal of whatever material the propeller may in future be made of. I think, therefore, Mr. Editor, that simple occurrences of this kind ought rather to be regarded in the light of improvements of

the principle than otherwise, as it is by such means only that perfection can be obtained and future disasters avoided.

"I cannot close these remarks without assuring you, upon the best possible authority, that the Rattler, even in her present incomplete state, has exceeded the highest expectations of the Admiralty and naval officers generally; and I will venture to assert, without the slightest fear of contradiction, that her performances, in point of speed and facility of manœuvring, have never been equalled by any steamer of her class. If, then, the efficiency of the screw has already been so clearly established by comparison on the smooth waters of the Thames, it is pretty evident, from the acknowledged opinions of its superiority for sea-going purposes, its powers in the case of the Rattler cannot yet be said to have been fully tested or thoroughly developed.

"Relying, Sir, on the impartial spirit with which your journal is invariably conducted to insert the foregoing remarks, and with many apologies for occupying so much of your valuable space,

"I remain, Sir, your obedient servant,

"F. P. Smith."

"16, *Fish Street Hill, City*, April 1st, 1844."

Our Woolwich correspondent corroborates Mr. Smith's statement in reference to gradually reducing the size of the screw. We believe by so doing to a certain length (shorter than the original), they attained the maximum speed: beyond that point, either way, they retrograded.

The Whale Fishery in the South Seas.

Sir.—I would wish through the medium of your valuable Magazine, to draw the attention of Shipowners to the Whale Fishery in the South Seas. At present no whaler, (except for the purpose of rounding Cape Horn) goes to the southward of 52° the consequence is that many vessels are three years, and some even as much as four years before they return home, whereas by going 12° or 14° farther south they might fill and return to England certainly in eight months.

I have been three seasons considerably within the Antarctic Circle entering each season at a different point, and from the time that we arrived in the vicinity of the ice, until we left it, scarcely a day passed that we did not see several whales, and on many days upwards of fifty. An erroneous report has gone abroad that the whales we have seen were all *finners*, but they were no such thing, we saw several species, some had fins, others (the greatest numbers seen) resembled the Black whale, and others again resembled the Sperm whale. I have seen sufficient to convince me that if any of our enterprising Shipowners were to embark in the speculation they would reap a good harvest.

I would propose that there should be three or four vessels (but certainly not less than two,) every person embarked to have an interest in the whole, (by this arrangement, the ships' companies would always be ready to assist each other,) the vessels to be fitted out precisely the same as the Greenland ships, and the whole to be under the direction of one person, for without that there would be no unanimity, and without the latter the speculation must fail. I am sure there are many persons who would undertake the management of the ships without expecting pecuniary reward should they not be successful.

I am, Sir, &c.,

Pownell J. Cotter,

116, *Minories, London, May 16th*, 1844. *Late Master H.M.S. Terror.*

P.S.—The ships should leave about the end of August.

The Inclined Angle in Surveying.—On the proposal of Lieut. Edye, in our last number for reducing the inclined to the horizontal angle, we have received the following from Capt. Beechey, R.N.

H.M S. Firefly, June 1844.

Sir.—In the last number of the *Nautical Magazine* there is a diagram for the reduction of an angle inclined to the horizon to the horizontal angle communicated to you by Lieut. Edye, my late Assistant in H.M.S. *Lucifer*, and claimed by him as his own invention.

As the merit of this invention (such as it is) is due to myself, I cannot suffer the letter of Lieut. Edye to pass unnoticed.

The explanation as to what may have given rise to the claim set up by that Officer is too long and too uninteresting for insertion, I shall therefore content myself by inclosing you a note from Mr. Bailey, who constructed the Diagram for me, on board the *Lucifer*, which will I think set the matter at rest, and which I beg you will do me the justice to insert, with this letter in your earliest forthcoming number. But in truth Sir, the merit of the invention is not worth contending for. Strictly speaking, you cannot treat the observation as a right angled triangle, upon which principle the diagram is constructed, and the result is but an approximation. But admitting it to be otherwise the addition of two logarithms by which the problem can be solved is so simple and expeditious, and at the same time so much more accurate, as to need no substitute.

I am Sir, &c.,

F. W. Beechey.

June 5th, 1844.

Sir.—In answer to your note of yesterday, I consider you to be the inventor of the diagram for reducing inclined to horizontal angles made by me under your direction in the *Lucifer*.

Mr. Edye was engaged at the same time trying a similar thing, but did not succeed until after your diagram was finished, and several angles reduced.

I am, Sir, &c.,

L. C. Bailey.

To Captain Beechey.

Edwards's Preserved Potato.

[We perceive that the Prepared Potato for Sea stock of Messrs. Edwards has been used on board H.M.S. Rattlesnake, just arrived from China. We understand that it was part of a supply sent to China in 1842, for the use of H.M. ships; and the very high opinion given of it by Dr. Allan, in charge of the sick on board of that ship, is another satisfactory proof of its great utility at sea.]

Edinburgh, June 17th, 1844.

Gentlemen.—I have much pleasure in adding my testimony to the excellence of your Preserved Potato, as a wholesome and nutritious article of diet.

A large quantity of it having been sent on board H.M.S. Rattlesnake, for the use of invalids under my charge on their passage from China to England it was issued daily in the absence of fresh provisions, and so far as my observation goes, I consider it a very valuable addition to the list of articles usually issued to the sick on board Her Majesty's ships, as a substitute for salt provisions.

Signed, James Allan.

Messrs. D. and H. Edwards and Co.,
1, *Bishopsgate Street.*

The Pendulum Marine Artificial Horizon.

The following observations were made on board H.M.S. Caledonia, at the Cove of Cork, with one of Capt. Becher's Pendulum Horizons fitted to a Sextant by Cary, the index error of the horizon very 52′

Dec. 18th 1843, Obs. Mer. Alt. ⊙ 15° 21′ 0″ Comptd. lat. 51° 54′ 20
Jan. 1st, 1844, · · · 15 42 30 · · 51 53 00
5th, · · · · · 16 4 0 · 51 53 20

Latitude of ship's position by survey, 51° 50′ 50″.

This ingenious instrument although requiring practice in its use, is a valuable addition to our Nautical instruments, and will prove highly useful on the coast of Newfoundland, and the St. Lawrence, or in other localities either at sea or on shore, when the horizon may be obscured by fog, or intervention of the land. There ought to be one on board of every vessel, and I recommend it to the attention of those intrusted with the Navigation of our ships.

A. Milne, *Captain.*

Devonport Dockyard, May 22nd, 1844.

The Marine Artificial Horizon at Cox's is your invention! I have tried it on several occasions, both at sea and on shore; its application to the Sextant is perfectly simple, and I find no difficulty whatever in using it.

I think I would venture to assert I could *always* obtain the latitude within four or five miles of the truth; but on occasions I have been as near as half a minute; the true place of ships having been found by angles taken with Ordnance points.

H. G. Edye, *Lieutenant* R.N.

Voyage of H.M.S. Cornwallis.

Canto the Seventh.

Arrival at Nanking—Treaty signed.

Oh! the horrors of war! we have all of us read,
That after a battle, the dying and dead,
And the wounded all lying quite helpless and gory,
Are enough to cure man of the mania called glory.
No description could paint such a horrible view
As was seen in the streets of the great Ching-Kiang-foo;
The stench of the dead, and the heat of the weather,
The terrible silence—the gloom altogether,
Cannot be imagined; while at each of the gates
Where the soldiers were quartered, one fancied the Fates,
Or the Furies, had suddenly come on the earth,
So mad was excitement—so boisterous the mirth.
To make room for themselves the chambers were cleared,
Silks, satins, and riches of all sorts appeared
In the gutters and streets, where the wretched Hindoos
Who follow our troops, with wild looks pick and choose
Some fine gaudy colour, (in which they all glory);
But a truce to such scenes—let's go on with the story.
Again under way, Vixen lashed alongside;
(Having tried on the first to stem the strong tide,
And only advanced three miles from Kinshan);
We got off on the third, and before sunset ran
To some steep and red cliffs, ten miles from Nanking,
Having passed the pagoda and town of Eching,
At six the next morning, we started again,
And at noon were well moored in a beautiful plain,
Near the walls of Nanking—and quite close to the shore,
The depth being twenty-five fathoms and more.

Before leaving Ching-Kiang, in a terrible fright,
A white-knobbed mandarin, known as Corporal White,
Came off with a message from old Eleepoo,
To try and detain us, but found 'twas no go.
The Chinese had so often pretended to treat;
That we almost believed this was only a cheat
To gain time.—But it seems they were really now frightened,
As the fall of Ching-Kiang had their senses enlightened.
On the ninth all the transports and troops had come to;
Leaving Shœdde and three regiments at Ching-Kiang-Foo.
The landing commenced without further delay,
And soon the whole force was in battle array,
And ready to batter, and storm if required,
This ancient metropolis, so much admired.
To describe with all justice a city so vast
In its size, I must candidly tell you is past
My poor powers; however, as doubtless you'll like
To hear something about it, why—"never say strike."
To begin then, the walls are some thirty miles round,
Enclosing of course an immense tract of ground,
About one-third of which, I should say at the least,
Is filled up with the town, on the south and the east.
The north-western angle comes down very nigh
To the river's bank where it is forty feet high.
Here Blonde and Cornwallis were lying in wait
With the steamers, to batter the small Ifung gate.
The northern face runs for some miles to Chung-shan,
A high and steep mountain. The general's plan
Was to batter the wall near the point where it turned
To the south from the hill, as somehow he had learned
That, the part of the city appearing inside
Was the principal place where the Tartars reside,
Well walled and defended.—His battery in all
Consisted of sixty-two guns large and small.
Our soldiers, the villages soon occupied,
Which extend with rich gardens for some miles outside
The walls of the city. High hills in their rear,
Most lovely and covered with wood, were quite near;
In the front were two gates, which they destined to take
And nearer the river a marsh and a lake.
(Commencing again from the ships) the west face,
For two or three miles ran along at the base
Of a range of low hills clothed with grass, trees, and bushes,
Thence down to the river, were swamps and tall rushes.
The wall leaving the hills, runs a mile or two more,
Then turns sharply towards the part mentioned before.
A broad deep canal which empties its mouth
Close to us—flows along this west face and the south,
Where a steamer could go,—did the bridges allow her,
One of which leads across to the famed porcelain tower.
When we came, we observed, little white flags suspended
All along on the walls, and knew well it portended
A settlement. But we used often to long
For another fight, though I believe it was wrong.
Then messengers passing each day to and fro
Between the Chinese and our own Plenipo,
Shewed that something was brewing; 'twas settled at length
That respecting our warlike position, and strength,
These hitherto proud and morose sons of Han,
Should make the first call on the great Englishman,
Who had sent to assure them, the very next day,
The attack would commence, should they further delay.
One fine morning the little Medusa was seen
Coming out of the creek with Keeying and Nin-kien,

And old Eleepoo; who with full powers were vested
By the Emperor; though he had often protested
To his "Killers of rebels" He never would stop
Till he saw all "Barbarians" kicked out "neck and crop."
They were followed by Mandarins blue, white, and red,
Whose balls (on their caps) shew their rank so 'tis said,
All dressed in blue silk with thick boots. And a dandy
Named Chang, twirled his fan with a grace,—Cherry brandy
They drank, ate some biscuits and fruits,
And found for the first time, we were not quite brutes.
They "chin-chin'd" and salaam'd and the vessel admired
Then walked off, while to honour them three guns were fired.
In two days, *our* three chiefs set their feet on the land,
Taking with them a party of troops, and a band,
And an army of officers, red coats and blue,
To whom this grand meeting, of course, was quite new.
We pulled into the creek—landed under an arch,
Walked over some planks,—and had a short march
To a joss-house, which purposely, as it appeared,
For this wonderful visit was recently cleared.
It was situate under the walls of the city,
But *outside* and not *in*, which I think was a pity.
Some rum-looking scarecrows stuck up without arms,
Did the duty of soldiers, and made their salaams
As we entered the yard, while a horrible blast
Of trumpets and horns burst forth as we passed;
The great men were received in a small room inside
While we little ones, in a large room were well plied
With fruit, sweetmeats, and cakes,—tea, shamshoo, and pipes,
And certainly some little fear for our tripes.
A rather soft band of flutes, *tom-toms*, and bells,
With a sort of harmonicon filled up the spells.
The visit then ended—we went as we came,
Having thus most auspiciously opened the game.
At last when of waiting we nearly were tired
Came the day which by all was so truly desired;
On the twenty-ninth day of this August at noon,
The three noble slaves of the son of the moon,
With a Royal Salute of twenty-one guns,
Signed and sealed the Great Treaty, which to this purpose runs:

"*The Treaty.*"

Dollars twenty-one million by Chinese to be paid,
Free permission for all British subjects to trade
At five ports; *videlicet*, Canton, Ningpo,
Shang-hai, Amoy, Foo-chow-foo; and to go,
From Amoy and Chusan (where a force now remains)
When the money is paid,—and then England retains
The whole of the island and bay of Hong-Kong,
To show the Chinese we were not in the wrong.
A Consul in each of these five ports to live;
"Native traitors," the Emperor agrees to forgive.

The same parties who figured at both previous meetings,
Came on board with the same most affectionate greetings;
Poor old Eleepoo, not having been in the air,
For some days (being ill) was brought up in a chair;
Our chief and Sir Henry received him on deck,
And supported him aft; he was then such a wreck.
Sir Hugh and his staff were also on board,
And all the "diplomatists" who could afford
A laced coat.—We were all in full dress,
Buttoned up; which we found pretty hot you may guess.

The interpreters drawn up in solemn array
Thom, Morrison, Gutzlaff, (Merry-belly,) and Lay.
As soon as the whole had been signed, sealed, and read,
All the big-wigs sat down and partook of a spread;
Drank the Emperor's health with a royal salute;
So thus ends all fighting, our *pigeons* and loot.
Sesostris will start off at once with the news.
Captains Richards and Whittington go,—if they choose
Straight to Suez.—But if it will cause no delay,
They will probably go from this place to Bombay,
And so on to Egypt, through Malta and thence
To England, where doubtless they'll be three months hence.
This news will I hope make you joyful and sing
"A British fleet moored off the walls of Nanking."!

H.M.S. Cornwallis, off Nanking,
August 29th, 1842.

Nautical Notices.

Anchorage of Santa Cruz.

Santa Cruz, March 28rd, 1844.

Sir.—I read with great pleasure Lieutenant Church's observations about anchoring at Santa Cruz. No one, I should think, is more capable of giving advice from his long experience, and so frequently entering and leaving the Bay in the *Ætna.* There can be no doubt of the goodness of the anchorage to the north, near Paso Alto, but the objection for Transports and Merchant ships is, that the Masters will anchor to the north of the other vessels to be near the landing place, and as the line of hills trends to the westward, and the land from the beach thereabouts is high, the land breeze is not felt, (unless strong) and large ships with heavy anchors and few men will often find it difficult to get away, as before the anchors can be wayed, and the sails set, they will drift among the small vessels. Hence the great superiority of the anchorage, I have pointed out, as the land breeze is more felt and precautions being taken that the ship's head swings to seaward, she is immediately clear of all impediment, and the anchor may be secured leisurely. I wish Lieut. Church had indicated the points Naga and Antequena more distinctly in his sketch.

W. Bartlett, *Consul.*

A vessel from the Northward should endeavour to make Punta de Anaga, (commonly called Point Naga,) which is the north-east point of Teneriffe; it is very high and easily known by two large and high rocks lying close to it. Care should be taken not to get to leeward, the prevalent winds being between N.N.E. and E.N.E. Point Naga lies in lat. 28° 30′ N., and the Salvages lie due N. and S. from the point 30 leagues. They may be approached at the East end, but they are very foul a long way off, at the West end. The Grand Salvage is very high, and may be seen ten or twelve leagues off.

After Passing Point Antequena, to the south of Naga, (there is a small shoal not far from the land between the two points mentioned, called La Mancha) the town of Santa Cruz will be visible. While running for the anchorage, keep both leads going, and bring up to the northward of the Mole head; or bring the clock front of the square church tower, that has a cupola, (San Francisco) to bear west true, (W.N.W. by compass) and anchor with this mark on or to the northward of it.

Ships anchor in 30 fathoms or less. Give a large scope of chain cable, when the northernmost fort (Fort Paso Alto) bears north true (N.N.E. by compass),

and the Tower of San Francisco, as before stated; the depth of water will be about 25 fathoms. The shore may be neared without risk, the water being deep, and no dangers that are not apparent. The anchorage to the south of the Mole, is reserved for vessels in quarantine. Variation 24·7 West.

Lieutenant Church of her Majesty's Navy, who has been employed in surveying the Canary Islands states, (See *Nautical Magazine* for February, 1844), that he had noticed that ships coming from the north-eastward to Santa Cruz, run down at too great a distance from the land, and do not haul in until they get nearly abreast of the town,—that they get a cast or two of the lead with no bottom, and immediately they get into soundings, the anchor is let go in a hurry, the bank being narrow, and the ship's head inshore, there being little time for consideration. Instead of this method of proceeding, he thinks it advisable to haul in upon the bank of soundings, immediately on passing Point Antequena, as from this point to Santa Cruz, the bank extends as far out from the land, as at the town, and the anchorage is just as good any where when abreast of the Barrancos.

He recommends Masters of vessels, to get in to the depth nearly that they wish to anchor in, and then run down parallel to the shore.

By this method besides having time to anchor leisurely, there is the advantage of being enabled, in case it falls calm, to let go an anchor under foot, wherever you may be. Should it fall calm while the ship is outside soundings, she may be taken away to leeward by the southerly set.

Tides.—Rise and fall from six to eight feet.—High water at half-past one clock, on the days of New and Full moon.

Owen Rock, *Entrance of Halifax.*—A rock inside the Sisters between Sambro Island and Chebucto Head, has been discovered by H.M.S. *Columbia* under the orders of Captain Owen, surveying the Bay of Fundy, who gives the following account of it:—

H.M.S Columbia, Halifax, May 21st, 1844.

The *Columbia* on the 20th May had visited the lighthouse on Sambro, and "having obtained the necessary observations for determining its position on her return to Halifax she touched on a sunken rock or ledge, before not known to exist in that place (as per bearings accompanying); there was 11 fathoms just before the vessel touched, 8 fathoms at the time at the starboard paddle-box, and 18 fathoms at the port paddle-box.

The *Columbia* grazed over the rock without entirely losing her way, so that there must have been at least twelve feet water on the part she touched (her draught being twelve feet six inches) which was at 4 p.m. or low water.

Our observations by means of the Meridian Altitudes of the Sun and of Venus, give the latitude of the lighthouse in 44° 26′ 20″ North. By numerous equal altitudes the longitude was found to be (6s·6) six seconds and six tenths of time East of the Observatory in the Dockyard or 1′ 39″ or 1′ 26″ East of the Tablet in the Dockyard.

Latitude 44° 26′ 20″ N., longitude 63° 34′ 2″ W.; longitude of Observation 63°¿35′ 41″, longitude of Tablet 63° 35′ 28″.—Variation of Compass 16° 46′ West by observations at Lighthouse.

(Signed) W. F. W. Owen,
Captain R.N., and Naval Surveyor.

Bearings and Observations on the Owen Rock:—

Black Rock, or Western Sister S. ½ E., Magnetic Summit of Lighthouse to water line, the angle is 00° 46′; assuming the summit to be 132 feet above the water line, (as we computed it by measure) the distance was 1′.6 bearing S.W.b.W. magnetic.

(Signed) W. F. W. O.

Note.—Raper's Table gives the Lighthouse (2′·5) East of the Tablet.

H.M. Surveying-Vessel Philomel,
Anson, Falkland Islands, December 30th, 1843.

Burdwood Bank.—Having been favoured by three weeks unusually fine weather, I have traced the limits of the Bank and examined more closely that part where (from Captain Ross's soundings) it appeared probable that still less water would be found, if not the Burdwood Rock itself. But I did not succeed in obtaining even as shallow soundings as Captain Ross did, and as I was able, on several days, to have boats sounding on each side of the ship's track and they never *once* succeeded in getting bottom, with from twenty-five to thirty fathoms of line, I think it is very unlikely that any part of the Rock approaches the surface nearer than twenty-five fathoms: the least water we obtained was thirty fathoms, and *that* rather to the south of Captain Ross's track. I cannot account for not having obtained as shallow soundings as he did when running on the East and West line, as the "*Terror's*" soundings on the North edge (which agree exactly with the "*Philomel's*") shew that our positions of the Bank are the same.

The bank extends above two hundred miles in an east and west direction (Captain Ross's soundings in two hundred and eighty fathoms may be taken as the eastern extreme) its breadth is from thirty to forty miles; on the shallowest part the bottom is rocky; outside this, (as the water deepens) small black pebbles and pieces of coral are mixed with sand and broken shells, the black stones being most numerous. This bottom extends over nearly all the bank to a depth of about sixty fathoms, the edges of the bank being composed of sand, but occasionally with the sand, small black stones are still found. When there was little or no wind there was no current to be perceived, though we anchored a boat, on the bank several times, to try it. When it blew fresh from north-west and south-west, a current was found to run, with the wind, of about half a knot an hour; in heavy gales it probably runs very strong.

On one occasion when anchored in the ship, in a calm, a current was running to the N.N.E., nearly one knot an hour, but there had been a breeze from the south-west the previous day, and a heavy swell shewed that farther south it was blowing much stronger, which may have caused the current. A very irregular sea gets up on the bank with even a fresh breeze, and in heavy weather it must be very bad indeed.

H. B. Sulivan, *Commander.*

Rhoon Rocks, *Azores.*

Caution to Seamen.

Sir.—Capt. A. Pronk of the Dutch bark, De Hoop, reported here, that on his passage from Batavia to Rotterdam, in the North Atlantic Ocean, near the Azores, the sixth of April in the afternoon, sailing with a strong breeze and fine weather, being on the quarter-deck with his officers, they were much alarmed by some of his people in the foretop, calling out that they saw a large rock close by on the lee-bow. The Captain immediately ordered the helm to be put down, and the vessel luffed up three or four points, to avoid the danger; with astonishment they saw several rocks, plainly visible from deck to every man on board. They passed them within a cable's length, and Capt. Pronk says, that it was an extensive group of rocks, with several points above water, some of them more than sixteen feet in height, against which the sea broke furiously. The Captain places this danger in 38° 32′ N. and 33° 16′ W. from Greenwich, by very good observations and chronometer; the next day they saw the Western Islands, and found the longitude by chronometer very exact.

In your Magazine 1840, No. 12, page 881, I found a similar report of the Brazilian brig "Constant," Master, Manoel Marriano Ferriera, who on his passage from Paraiba to Lisbon, fell in with a group of rocks above water, in 37° 56′ 20″ N. and 33° 4′ 8″ W. from Greenwich, and afterwards he discovered another group of rocks, in 38° 26′ 44″ N. and 30° 25′ 10″ W.

Capt. Pronk has made mention of his discovery in our newspapers, and I give

notice of it to you, Sir, and request that you will be so kind to place this report in your Magazine, so that this new danger may be known to our English seafaring brethren.

With which I have the honor to be Sir,
Your obedient Servant,
F. Fokhens
Captain of the Dutch Ship Rhoon and Pendrecht.

To the Editor the Nautical Magazine.

Six Fathom Bank, *Java Sea.*—By the following extract from the log of the Cornwall transport, Lieutenant A. B. Howe, R.N., Agent, there appears to be less water on this bank than hitherto supposed.

"November 23rd, 1843:—At 11h. A.M., seeing bottom plainly, sounded in 9 fathoms, following casts 8, 7, 6, 5½, 4½, tacked. This is the Six Fathom bank, but as the water appeared much shoaler ahead, I apprehended danger when I ordered the ship about. In half an hour no ground at 30 fathoms, latitude at noon, obs: 5° 46′ S. lon. 117° 23′ E. Wind light from East, and we made little progress. 1 P.M., tacked to Eastward, very little way on the ship, (going about one knot.) At 4, bottom was seen again, 10 fathoms. Sent a boat ahead to sound, ship going S.E.b.E.; 7 fathoms was the least water gained, which deepened gradually to 20, and then no bottom."

The foregoing will be a sufficient warning to vessels, to avoid the six fathom bank.

Port Royal, Jamaica.—We have received the following notices from Mr. G. Biddlecombe, master of H.M.S. Imaum, respecting the buoyage of the entrance to this harbour.

No. 1.—A black beacon has been erected on the S.E. angle of Fort Augusta, the top of which is forty feet above the horizon, and five feet broad.

The floating white beacon on the 22 feet rock, near the west middle bank, in line with the black beacon at Fort Augusta, is the leading mark through the South Channel, when the notch in the mountain is obscured.

The floating beacon, the black beacon, and the notch in the mountain, are in line with each other, bearing N. ½ E. Magnetic.

2. The chequered black and white buoy on the shoal of 22 feet westward of the west middle bank is removed and a white beacon thirty feet above the horizon, with a vane of rails four feet square on its upper part, moored in the same situation; which besides marking the position of the shoal, is the leading mark into and through the South Channel, when in line with the magazine of Fort Augusta, and also with the Notch in the mountain (the old leading mark) bearing N. 8° E. true, so that in the event of the Notch in the mountain being obscured, vessels may enter the South Channel by bringing the White beacon in line with the magazine of Fort Augusta.

No. 3.—A black buoy has been placed at the north-eastern extreme of the rocky shoal extending from Rackum Kay in 21 feet water, with 5 fathoms close to the northward of it.

G. Biddlecombe,
Master of H.M.S. Imaum.

Naval Intelligence.

(From the Portsmouth Herald.)

Portsmouth, June 22.—*Wanderer* 16, Commander G. H. Seymour, arrived on Wednesday morning from China, bringing a number of invalids from the squadron, and a million of dollars in specie silver, part of the Chinese ransom. She went into harbour on Thursday, and unloaded her precious freight at the dockyard, which was conveyed to the Royal Mint per rail, under an escort of the 59th Regiment. She has brought home Mr. Brooks, who took a voyage round the world in his yacht, and lately greatly distinguished himself in a skirmish with the Malay pirates on the coast of Malacca, when she lost two of her seamen, and had eleven others wounded. Mr. Brooks also received two dangerous wounds, one in his forehead and the other through his arm. This vessel is ordered to be paid off at this port. Commander Seymour, who is the second son of Admiral Sir G. Seymour, received his promotion to the rank of Captain on his arrival.

Apollo, troop-ship, Commander W. Maclean, arrived on Tuesday night from Quebec, and the *Resistance* troop-ship arrived on Friday from Quebec and Halifax, which she left on the 21st of May. Sir William Symonds, the Surveyor of the Navy, is about to build a new frigate, the same as the Vernon, 50, to be called the *Constance*. Mr. Blake, of Portsmouth, Mr. Fincham, of Chatham, and Messrs. Chatfield, Cruize, and Reed, (Committee of Naval Architecture) at Chatham, have each a frigate upon the stocks from their own designs. Mr. Blake's is to be named *Leander*; Mr. Fincham's, *Raleigh*; and the School of Naval Architecture, the *Thetis*. The following are their respective dimensions:—

	Length. Ft. In.	Breadth. Ft. In.	Depth. Ft. In.	Tons.	Guns.
Constance.	180 0	52 8	16 3	2,126	50
Leander.	181 4	49 10	12 8	1,960	50
Raleigh.	180 0	50 0	16 8	1,935	50
Thetis.	164 7	40 6	13 6	1,524	36

The following ships are ordered to be laid down:—At Portsmouth, the *Shannon*, the same as the *Leander*, by Mr. Blake; at Pembroke, the *Arethusa* and *Liffey*, same as the *Constance*, by the Surveyor of the Navy, Sir W. Symonds; at Chatham, the *Severn*, same as the *Raleigh*, by Mr. Fincham.

The *Porcupine* steam-vessel, a beautiful specimen of a little war steamer, was launched at Deptford on Monday. She is to be commissioned by Captain Bullock. Her extreme length is 141 feet; extreme breadth, 24 feet 1½; burthen in tons, (o. m.) 382.

In harbour.—*Victory, Excellent, Rattlesnake, Prometheus, Collingwood, Malabar* and *Fearless, Sydenham*, and *Echo* steamers, *Arrow* ketch and *Prince George* transport. In Dock.—*Prince Regent, Rodney, Victoria and Albert, Scourge* (building) *Athol, Pantaloon, Lily and Waterwitch.*

At Spithead.—*St. Vincent, Resistance and Bonetta.*

The Mediterranean Fleet, Malta, June 5th.—In harbour, *Formidable*, 84, bearing the flag of Vice Admi. Sir E. Owen, K.C.B. & G.C.H., Capt. Rich; *Ceylon*, 6, bearing the flag of Rear Admi. Sir L. Curtis, Lieut. Curtis; Steamers *Hecla*, Com. Duffil, *Polyphemus*, Lieut. Com. Spark. On Foreign stations—on surveying duty, *Beacon*, Com. Graves. Gibraltar—*Queen*, 110, Capt. Sir C. Sulivan; *Locust*, 3, Lieut. Lunn. Coast of Spain—*Scout*, 18, Hon. J. R. Drummond; *Vesuvius*, Com. Ommanney. Piræus—*Savage*, Lieut. Bowker, *Virago*, Com. G. Otway. Constantinople—*Devastation.* Corfu—*L'Aigle*, 24, Capt. Lord C. Paget, *Orestes*, Com. Cannon. Smyrna—*Snake*, 16, Hon. H. B. Devereux. *En route* to different ports—To Athens, *Belvidera*, 38, Capt. Hon. G. Grey. To Marseilles, *Alecto*, Lieut. Com. Hoseason. To Tunis and Barcelona, *Geyser*, Com. Carpenter. To Gibraltar, *Warspite*, 50, Capt. P. Wallis. *En route*

to Corfu and the Ionian Islands—To Corfu, *Medea*, Capt. Warden. To the Islands, *Acheron*, Lieut. Com. Alpin.

Sheerness, June 20.—The *Apollo*, troop ship, in working into the harbour this afternoon, at the top of high water, got on shore on Grain Spit, opposite Garrison Point. Two private steamers went immediately to her assistance, but were unable to get her off. The *Africaine* steamer and *Sindbad* and *Aid* lighters are now alongside taking in stores to lighten her. She is on a soft bottom, and is not likely to receive much damage.

At the Nore—*Camperdown.*

In Harbour—*Ocean*, *Africaine*, and *Raven.*

In Basin—*Monarch*, *Vulture*, *Vernon*, *Boscawen*, and *Crocodile.*

In Dock—*Æolus*, *Camelion*, and *Amazon.*

Off the Harbour—*Apollo.*

Devonport, June 20.—The *Apollo*, 8, troop ship, passed up Channel on Sunday evening, from Quebec, with the 68th Regiment on board. *Fox*, 42, Captain Sir H. M. Blackwood, Bart. arrived on Wednesday from Cork. She is refitting, and when ready will proceed to China. *Resistance*, 42, troop ship, Commander G. E. Patey, passed this port this morning, (Thursday,) and went up Channel.

In Harbour—*San Josef*, and *Confiance.* In Dock, repairing—*Kent*, *Actæon*, *Grecian*, and *Ranger.* In the Sound—*Caledonia*, and *Cygnet.* In Barnpool—*Fox.*

Naval Review.—Upon the occasion of the King of the French's visit to this country, which is now finally arranged for the first week in September, a grand Naval review will take place in the presence of Her Majesty the Queen and her august visitor. As the flag ships of the Port-Admirals, and the experimental squadron, forming altogether sixteen or seventeen sail, will be cruising in the channel at this period, there will not be the least difficulty in accomplishing it. The ships which will then be at sea, will be the *St. Vincent*, 120, flag ship, Admiral Sir Charles Rowley, Capt. R. Rowley; *Caledonia*, 120, flag-ship, Admiral Sir David Milne, Capt. A. Milne; *Camperdown*, 104, flag ship,, Vice-Admiral Sir J. C. White, Capt. F. Martin; *Albion*, 90, flag ship, Rear-Admiral Sir H. Pigot, Capt. Nicholas Lockyer; *Collingwood*, 80, flag ship, Rear-Admiral Sir George Seymour, Capt, H. Eden; *Queen*, 110, Capt. Sir Charles Sullivan; *Fox*, 42, Capt. Sir R. M. Blackwood; *Amazon* and *Dædalus*, frigates razeed to corvettes; *Flying Fish*, *Mutine*, *Daring*, *Osprey* and *Espeigle*, new class brigs of 12 guns; *Cruizer*, 16, *Pantaloon*, 10, *Waterwitch*, 10, and a number of steam-vessels.

China Fleet, Distribution on 25th February.—At Hong-Kong—*Agincourt*, 72, Capt. H. W. Bruce, flag of Rear-Adm. Sir T. Cochrane, Com. in Chief; *Castor*, 36, Capt. C. Graham; *Samarang*, 26, surv.-ship, Capt. Sir E. Belcher; *Minden*, 20, hospital-ship, Capt. M. Quin; and *Alligator*, 26, troop ship, Master Com. J. N. King; *Driver*, steam-sloop, Com. C. O. Hayes. At Whampoa—*Childers*, 16, Com. G. G. Wellesley, taking in specie for England. At Chusan—*Cambrian*, 36, Commodore Henry D. Chads; *Plover*, surv.-ship, Capt. R. Collinson; *Young Hebe*, surv.-ship, Lieut.-Com. T. Bate. At Ningpo—*Pelican*, 16, Com. P. Justice. At Shanghai—*Wolf*, 18, Com. A. Vyner. At Amoy—*Serpent*, 16, Com. W. Neville; *Wolverine*, 16, Com. H. G. Morris; and the *Vixen* st.-v., Com. G. Giffard.

The West India squadron was thus distributed on 10th of May:—at Jamaica, *Imaum*, 72, Commodore A. R. Sharpe; and *Lark*, 2, surv. schooner, Lieut.-Com. G. B. Lawrence. Aux Cayes, St. Domingo.—The *Pickle*, 2, Lieut.-Com. J. A. Bainbridge. Port au Prince.—*Spartan*, 26, Capt. the Hon. C. B. J. B. Elliot; and *Griffon*, 3, Lieut.-Com. Charles Jenkin. Vera Cruz.—*Pique*, 36, Capt. the Hon. M. Stopford; and Rose, 18, Com. H. R. Sturt. Nicaragua.—*Hornet*, 6, Lieut.-Com. R. B. Miller. Barbadoes.—*Inconstant*, 36, Capt. Charles Fremantle. Antigua.—*Electra*, 18, Com. Darley. Halifax on 4th June.—*Illustrious*, 72, Capt. Erskine, flag of Vice-Adm. Sir Charles Adam, K.C.B., Com.-in-Chief; *Eurydice*, 26, Capt. E. Elliot; *Scylla*, 16, Com. R. Sharke; *Hermes*, steam sloop, Lieut.-Com. W. Carr.

New Books.

Hints on Sea Risks.—A short time ago we had occasion to notice the work of Lieut. Jennings, R.N. on sea risks, when we observed that its price would be found an impediment to its circulation. We now find that Lieut. Jennings has seen this also, and has accordingly reduced the price, which will place it more within the reach of that extensive class of persons for whom it is intended.

Chronometer Expeditions are always attractive to Naval readers, and we had therefore prepared some translation of a portion of M. Struve's very interesting account of the measurement of the meridian distance between Altona and the central observatory of Russia at Poulkova by 86 chronometers. This however want of space obliges us to reserve for our next number—when we shall have an opportunity of noticing other expeditions of the same kind, likely to be carried on in the course of the present year.

New Charts.

Nimrod Sound,—*China.—Surveyed by Commander the Hon. G. T. Hastings, R.N.*, 1843.

Middle Island is in lat. 29° 34′ 20″., long. 121° 43′ 15″, High water full and change 10h. 30m. rise and fall twenty feet.

The River Min.—*China.—From the entrance to Foo-Chow-Foo.—Surveyed by Captain Kellett R.N., C.B.* Off the Temple High water Full and Change 10h. 15m. rise nineteen feet, spring tides.

Entrance to the River Min.—*China.—Surveyed by Captain Kellett, R.N. C.B.*, 1843.

Contains an enlarged plan of the Wou-Fou-mun pass in which there is 22 fathoms water.

The Woosung River.—*China.—From Woosung to Shang-hae and to the Lake Tien-Shan, by Commanders Kellett and Collinson*, 1842.

We have also the

Woosung River.—From the entrance to Shang-hae on a scale of about a mile to 2½ inches, by the same officers, which will prove an indispensable chart for ships visiting China, and the

Yung Keang River from the entrance to Ningpo, surveyed by Captain Collinson and Lieutenant W. T. Bate, r.n., thus completing the charts of the five ports of China, thrown open to trade. The plan before us is on the scale of a mile to three inches.

The River Fergus.—*Ireland.—From Ennis to the Shannon, Surveyed by Commander J. Wolfe, assisted by Lieutenant R. B. Beechey, R.N.*, 1840.

The Islands of Patmos, *Arki, and Lipso, with the adjacent Isle of Gaidaro, Archipelago, by Commander T. Graves, and the Officers of H.M.S. Beacon*, 1837.

The Gulf of Corinth or Lepanto.—*Greece.—Surveyed by Lieutenant Owen Stanley*, 1834.

Serranilla Bank.—*West Indies.—by Commander R. Owen*, 1835.

Massacre of Lieut. M. T. Molesworth, and some men of the Cleopatra.—Letters have been received by the Admiralty from Capt. Wyvill, of the Cleopatra, 36, at the Cape of Good Hope, confirming the account of the massacre of Lieutenant Molesworth and several men of his ship. It appears from the peculiar local currents on the west coast of Madagascar, the Cleopatra was carried on a coral reef, the position of which is about four miles from the land, but she fortunately was got

off without receiving any serious damage, and subsequently Lieut. Molesworth, in the pinnace, with a crew of thirteen men, without any arms whatever, were sent to recover a kedge anchor, which had been used in warping the frigate off. Their position and character naturally drew a great number of natives in canoes to the spot, two of whom, while the men were engaged in their work, entered the man-of-war's boat, with an intention, as the crew supposed, to steal the stores. They were immediately turned out, on which it would appear the poor fellows were surrounded by the canoes, and immediately became targets for a shower of spears, which were hurled at them with terrible effect. The ship was only about two hawsers' lengths from the boat, but so sudden was the attack, and so unexpected, that it was not seen from on board, and the wretches were only frightened away by supposing the frigate was standing in towards them, the ship being taken aback at the moment, her head payed off in that direction, and the canoes made off for the shore with all possible speed. Lieutenant Molesworth and two of the men were killed on the spot, five received mortal injury, and three others were dangerously wounded, leaving three only of the pinnace's crew untouched.

Lieutenant Molesworth was the son of the Rev. William Molesworth, of St. Breock, and cousin of Sir William Molesworth. He was a young Officer of great promise, and had distinguished himself on several occasions. He was promoted from the *Mercury* tender, for his indefatigable and extraordinary exertions in keeping her afloat in the Bristol Channel, in Feb 1841, after being thrown on her beam-ends in a hurricane, and half filled with water, when her crew was washed overboard, and two of them were drowned; and of the 22 volunteers she had on board, two were killed and six wounded by the shifting of the ballast. On arriving at Portsmouth on this occasion, the survivors unanimously declared, that but for the indomitable energy and example of Mr. Molesworth they must have sunk, as the sea washed away their boat, sails, companion, and forced up and shivered the lower deck.

NAUTICAL TUITION.—We have received from Mr. J. G. C. Curtis of the Hydrographic Office, Admiralty, a Prospectus, from which we learn that his leisure hours (before 10 A.M., and after 4 P.M.,) are employed in giving instruction in Marine Surveying, Navigation, &c., and from our knowledge of this gentleman, we consider him well qualified for the undertaking. He has been ten years and a half in H.M. Navy, and has had great experience in surveying operations on shore and afloat.

PROMOTIONS AND APPOINTMENTS.

PROMOTIONS.

CAPTAIN—G. H. Seymour.

COMMANDERS—E. B. Stewart, W. C. Aldham.

LIEUTENANTS—Hon. T. A. Pakenham, Lord C. W. Butler, C. F. Compton, P. W. Coventry.

APPOINTMENTS.

CAPTAIN—L. T. Jones to study at the Naval College.

COMMANDER—W. C. Aldham to *Winchester*.

LIEUTENANTS—C. T. Compton (1844) to *Agincourt*—W. T. Bellairs (1819) to be agent in a Royal Mail Packet—W. Peel (1844) to *Cormorant*—T. Gresham (1843) to *Medea*—D. N. Welch to *Rose*.

MASTERS—F. R. Sturdee to *Daring*—T. C. Pullen to *Flying Fish*—J. S. Hill to *Osprey*.

MATE—S. Osborn to *Black Eagle*

MIDSHIPMEN—J. Parish to *Excellent*—A. H. Hodgkinson to *Collingwood*.

NAVAL CADETS—R. Parker to *Alfred*—H. E. Bacon to *Camperdown*—A. C. Cowper and C. Markham to *Collingwood*—W. H. Truscott to *Excellent*.

SURGEONS—C. H. Fuller to *Agincourt*—J. S. Hampton to *Auckland*—J. J. Lancaster to *William Jardine*—J. Munro M.D. to *Emily*.

ASSISTANT SURGEONS—J. Findlay to have charge of the *Romney*, slave depot at the Havannah, v. Birtwhistle, invalided—J. G. Buchanan to Greenwich Hospital—T. Tait to *Fearless*.

NAVAL INSTRUCTORS—W. S. Harvey to *Agincourt*—J. Richardson to *Excellent* to qualify—W. F. Smith to *Iris*.

PAYMASTERS AND PURSERS—G. H. Moubray to *Daring*—F. Cole to *Osprey* C. Fielon to *FlyingFish*.

COAST GUARD.

Appointment—Lieut. H. Probyn, RN., to Greatham Cree Station, v. Taylor, to Chischester Harbour.

Marriages and Deaths.

Marriages.

June 16, at St, John's Bethnal Green Lieut. W. Prettyman, R.N., to Catherine Elliott, daughter of Lieutenant A. Webb, R.N.

June 13, at Stoke Church, Lieut. G. A. Seymour R.N., to Elizabeth Greaves, daughter of John Cunningham, Esq., Surgeon New Village near Gosport.

Lately at Kingston Church, Portsea, J. G. Hodges, Esq. master of the Royal Navy to Mary third daughter of E. Naylor, Esq. R.N.

Deaths.

At Highfield near Southampton Vice Admiral Hollies, one of the oldest flag officers of the Navy.

June 9th, at Ealing, Captain Robert Tomlinson, R.N. brother of Admiral Tomlinson, aged 85.

June 15, at Helmesley, Yorkshire, G. Flintoft, Esq., Paymaster and Purser, R.N.

June 18, at Brighton Priscella, wife of Rear Admiral Inglefield, C.B.

METEOROLOGICAL REGISTER

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st May, to the 20th June 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Tu.	29·86	29·96	48	62	43	63	N	NE	3	3	opd (2)	b
22	W.	30·15	30·20	54	65	46	66	NE	NE	2	3	o	bcm
23	Th.	30·16	30·12	53	67	48	68	NE	E	3	4	o	bc
24	F.	30·08	30·02	55	66	45	67	NE	NE	3	4	bc	b
25	S.	30·03	30·05	52	64	47	65	NE	NE	3	4	o	bv
26	Su.	30·16	30·20	47	55	41	56	NE	NE	6	6	qbc	qbc
27	M.	30·20	30·14	49	50	42	52	NE	NE	6	6	qbcphr 2)	qbcphr (3)
28	Tu.	30·02	29·98	54	56	42	58	NE	NE	7	6	qo	qo
29	W.	29·94	29·92	51	54	45	55	NE	NE	4	4	op 2)	op (3)(4)
30	Th.	29·95	30·02	48	57	44	60	NE	NE	3	3	o	bc
31	F.	30·06	30·04	49	59	46	61	NE	E	1	2	o	bc
1	S.	30·02	30·00	55	67	44	68	NE	NE	3	4	bc	bc
2	Su.	29·96	29·96	53	61	46	62	NE	NE	3	4	o	bc
3	M.	30·09	30·13	53	63	44	64	N	N	5	4	bc	bc
4	Tu.	30·19	30·15	59	71	48	74	SW	SW	4	4	bc	bc
5	W.	30·00	29·97	66	72	48	74	S	S	3	4	bcm	bcm
6	Th.	29·77	29·78	60	66	54	68	S	SW	3	3	bcp 1)	bc
7	F.	29·94	29·93	62	66	55	67	SW	SW	4	6	o	bc
8	S.	30·12	30·10	63	74	52	76	SW	SW	2	2	bcm	bcm
9	Su.	30·02	30·04	60	73	54	74	SW	SW	1	4	od (2	bcm
10	M.	30·09	30·09	63	69	52	72	SW	SW	3	2	bcm	bcp (3
11	T.	30·24	30·25	60	76	49	77	S	S	2	4	bc	bc
12	W.	30·22	30·20	60	77	50	78	SW	SW	2	3	bcm	bcm
13	Th.	30·06	30·03	67	82	58	83	W	W	6	6	qbc	qbc
14	F.	30·09	30·10	62	72	53	73	NW	SW	5	6	bc	qbc
15	S.	30·08	30·08	59	67	50	68	W	NW	5	5	qbc	qbc
16	Su.	30·20	30·23	56	67	48	68	NW	W	3	2	bc	bc
17	M.	30·20	30·13	62	68	47	71	S	SE	3	3	bc	bc
18	Tn.	29·80	29·75	60	68	53	69	SE	NE	2	2	bcp (1	bc
19	W.	29·88	29·96	53	58	52	60	NW	NW	3	4	op 1)	o
20	Th	30·09	20·02	57	57	48	70	SW	SW	3	3	op 2)	bc

May, 1844.—Mean height of the Barometer=30·094 inches; Mean temperature = 54·0 degrees; depth of rain fallen 0·32 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

The bottle paper from the Ferroe Islands has reached us, and with some others will appear in an early number.

The Index to the 13 volumes of the Nautical Magazine now completed, is ready for the press. As the printing must depend on the demand it is likely to meet, Subscribers requiring copies are requested to express the same through their Booksellers.

Hunt, Printer, 3, New Church Street, Edgware Road.

Mediterranean Hydrography.—Port Gavrion and its Outer Anchorages, *I. Andhro.*

H.M. Surveying Vessel, Beacon, Port Gavrion, Andhro, Archipelago, May 30th, 1844.

Mr. Editor.—Port Gavrion of the Greeks, or Port Gabriel as it is more generally termed by foreigners, in memory perhaps of the Saint of that name, deserves a more classical appellation, being evidently the *Gaurion of Xenophon*, and *Gaurolion of Livy, (Class. Lib. Livy, vol. V. p.* 313,) so that its present name, as is very often the case in this country, is only a slight corruption.

As it is now almost unknown, except to the small coasting vessels of the Archipelago, and totally disregarded by European vessels, I am the more induced to endeavour to bring it into notice from the shelter it affords (as well as its adjoining anchorages) in strong northerly gales, which are so prevalent during the summer months, to ships working through the Douro passage; and from its proximity to this passage it might with advantage be much oftener resorted to than it is at present. Vessels instead of beating about in these gales under the lee of Andhro, or bearing up for the anchorages at Cape Colonna, Port Mandri, or Raphti, or taking shelter in Port San Nicholo of Zea, might avail themselves of this port and its neighbourhood, thereby saving much time and anxiety.

From the extensive circulation of your journal, and from its being in the hands of most commanders of merchantmen, perhaps these remarks may be worthy of insertion, and by adding a slight outline of its position and localities it will I think prove an acquisition, or at least a small *addition* to our scanty knowledge of these seas.

Having made Port Gavrion head-quarters during our examination of this island, having even rode out a southerly gale in it with safety and security, and having had sufficient opportunities of proving its capabilities, I have pleasure in forwarding the accompanying remarks, from the pen of my assistant surveyor Lieut. T. A. B. Spratt, by whom the port was surveyed.

I am, &c.,

Thomas Graves,

Commander H.M.Surveying Vessel Beacon, and in charge of Archipelago Survey.

The anchorages of Gavrion on the west coast of Andhro consist of a port and roadstead. The former is a small inlet above half a mile deep, but scarcely a quarter broad, distant seven miles from the north-west point of the island. The roadstead is an open bay, half a mile to the eastward of the port, called the Bay of Fournos. Between, or rather off the port, and roadstead are a cluster of seven islands and rocks, either side of which is clear of dangers. The largest island *Megalo-nisi* is the easternmost; opposite to it is a point, or small rocky peninsula that separates the Bay of Fournos from another sandy bay called Agios Petros and between the latter bay, and the east point of Port Gavrion

are a succession of rocky points projecting from the coast with small shingly beaches between them, off which are several rocks above water, besides patches of foul ground extending a distance of two cables from the shore. Midway between the broken indented part of the coast, and the Gavrion islands, is a large and dangerous patch of rocks upon which H.M S. *Martin* struck, in 1827. The shoalest part has only two feet on it, besides this there are two or three others, with from six and eight feet over them, surrounded by three and four fathoms; the extent of this shoal is three cables in length, and much in the way of a vessel desiring to pass between the Gavrion islands and Andhro.

The marks for avoiding this dangerous rock for a vessel standing towards it from the west when intending to work into Port Gavrion, is the summit of Jura open to the westward of the westernmost of the seven Isles, (Gaitharo-nisi,) which is the tacking mark, or if Jura should not be visible, keep the small sugar loaf islet, the most southern of all the group open of the most extreme of Gaitharo-nisi. The mark for running between the rock and the island is the Monastery on the hill over Fournos bay, its own breadth open of the point of the peninsula separating it from Agios Petros Bay. There are no other dangers near these islands, but clear passages between some of them, for which no leading mark can be given, but they are sufficiently evident by reference to the plan.

Port Gavrion terminates at its innermost part in a tranquil sandy beach, fully indicating the safety of this little harbour in all winds, near to which is the best anchorage; for just within the entrance the bank is at first deep and steep, the anchoring being in from 5 to 7 fathoms, the bottom of sand and mud intermixed with weed. The port is open only to the south, from which point it never blows home, and any great sea or swell is prevented by the islands lying in front of it. To a vessel seeking shelter from a southerly gale, after having passed through the Douro passage it is very conveniently situated, but it is difficult of access during a northerly wind owing to the violent gusts from the mountains, as well as the baffling winds which prevail when the wind is moderate, an inconvenience we frequently felt during the continuance of these winds, which prevail with scarcely any intermission from June to September, both here and in the neighbourhood. The roadstead is therefore to be preferred during this season, particularly for a three-masted vessel.

In the Bay there is an ample and excellent summer anchorage for a whole fleet, which includes any part of the ground to the eastward of the rock, and between the islands and Fournos Bay: but deep water is preferable from the holding ground being better, as under 12 fathoms it is coarse sand. The best anchorage is in from 15 to 25 fathoms, muddy bottom, with the east point of Jura, on with the east part of the large island (Megalo-nisi). The bay is open only from south to south-east (true), and a vessel finding it inconvenient can then run through the passage to the south of the rock, into Port Gavrion, or to sea at pleasure.

Supplies can be obtained in small quantities at Port Gavrion, where there is a *scala*, and where a small supply of water can also be obtained by sinking a well in the plain near the shore; but in a small bay at

the east end of Cava Colonna a spring trickles down a ravine over the magazines, which in one hour, by the labour of five or six men might be made available to water a large ship.

T. A. B. SPRATT,
Lieut. and Assistant-Surveyor,
H.M.S. Vessel Beacon.

TALBOT REEF.—GULF OF TARANTO.

THE Commander of the late brig Talbot, having had the misfortune to lose his vessel, owing to the incorrectness of the chart of the Gulf of Taranto, and the extraordinary current setting round Cape St. Mary into the Adriatic, has adopted the praiseworthy conduct of reporting the event to the Lords Commissioners of the Admiralty, pointing out very properly for the benefit of his brother seamen the defect to which he owes his misfortune, as well as several other little matters which closely concern seamen frequenting the same navigation. We cannot do better in the first place, than print the substance of the commander's letter, that his remarks may be more generally circulated, and will add a few observations which they may call for.

10, *Cannon Street Road, Commercial Road, July 2nd,* 1844.

In consequence of the loss of the late brig Talbot on the 10th of February last, belonging to Messrs. Newman, Hunt, and Co., of London, of which I had the command, and which was totally wrecked on a reef extending from the westward of Pali point in the Gulf of Taranto, towards Cape St. Maria, the entrance to the Adriatic, running along the coast about five miles, and off between three and four, for the benefit of my brother shipmasters and mariners in general, I beg leave to inform you that this said reef is not laid down in my chart. My having been detained at the wreck for upwards of one month and residing near the spot, gave me an opportunity of seeing, in bad weather, the extent of the breakers. In some places between the reef and the shore there are five or six fathoms of water. I have also to acquaint you, that there is no light on St. Andrea Island, near Gallipoli, nor never has been; this light is spoken of in the Directory as well as the chart. I remained at Gallipoli several weeks, but at Taranto a sea port from which the Gulf is named, there is a light; it is merely for the guidance of fishermen, (this light is not named).

Cadiz Light is marked on my chart as two revolving lights, which on the contrary is only one bright fixed light, and on Cape St. Vincent it is marked and painted *Light-house.* There is no light there, and I believe never has been any.

My chart is reduced from the Original Surveys of officers in the Royal Navy, by Alexander G. Findley. If the chart should continue with the same errors, it will lead others into a similar calamity as my own. From the vague representation of the chart, together with the excessive indraught of current into the Gulf of Taranto and Gulf of

Venice (changing with the wind) which is not mentioned, has been the cause of my losing my vessel together with my employment.

I am, &c.,

ROBERT WILLIAM NEWBERY.

Assuredly there is no such reef in the chart as that here pointed out, although we do find a reef in it called the Girlito rock and Ugento shoal, about a mile and a half off the shore westward of Point Pali. But there is nothing extending for five miles along the coast, nor three or four miles from it. The information concerning the light of Gallipoli is important, and with respect to that of Taranto the knowledge of a fisherman's light being there is sufficient. With regard to the light of Cadiz, the Government authorities having always named it a revolving light, *(Linterna giratoria)*, the information that it is a fixed light is somewhat startling. A fixed light, and a revolving light cannot surely be mistaken for each other. We can, therefore, only refer seamen to the two statements, adding that we shall be glad of a corroboration of either. Again with regard to the light on Cape St. Vincent, there has been no announcement of the kind, and the chart should have expressed the lighthouse as only building, as we find it stated to be in the Admiralty Chart.

The following remarks of Commander Carpenter of H.M.S. *Geyser*, may be of service to the safe navigation of the Gulf of Taranto, in addition to the cautions given by the loss of the Talbot.

REMARKS ON THE NAVIGATION OF THE GULF OF TARANTO AND PORT OF GALLIPOLI.—*By Commander E. J. Carpenter, H.M. Steam-Vessel Geyser.*

Malta, February 27th, 1844.

THE Gulf of Taranto is bounded on the east by Cape St. Maria de Leuca, and on the west by Cape Nau. The former is rather a low tract of land, of a greyish colour, with flats extending out at least two miles from the mainland, which, at times have very little water on them. It would be difficult to see this land in moderately thick or hazy weather till you had run into danger. The English brig Talbot struck on one of these flats, on the 10th inst. and was wrecked. The opposite coasts of Albania and Calabria generally speaking are high. Cape Nau is moderately high.

The currents are said to be variable on this coast, according to the force and direction of the wind, therefore Cape St. Maria de Leuca should be approached with great caution.

On making the town of Gallipoli I was deceived in not finding a lighthouse placed on the island of St. Andrea, as it was marked so on the chart; and likewise stated in the Book of Directions. This island is very low, almost on a level with the water, and it is situated about two miles distant from the town. Had I not been certain of the position of the ship, I should not have supposed that I was then opposite the town of Gallipoli, so great is the disappointment in not finding a lighthouse on the island; added to which there is no passage between the

small islands for vessels drawing more than six feet water, as the book of instructions would lead you to suppose.*

The anchorage between the island of St. Andrea and the next small island towards the town is very much exposed, although you can anchor in from five to seven fathoms across. The port of Gallipoli however is an excellent port of refuge for vessels caught in a south-west gale in the Gulf of Taranto; it is equally convenient for mercantile purposes; One danger is particularly to be avoided, namely, a sunken rock about forty feet in diameter, situated in a north-east direction from the small island off the north angle of the town; its cross bearings are as follow: When the east end of the north angle of the fortification is on with the arched window of the large white building behind it, and the low building nearest the point towards the Friar's convent, is just clear of the door of that convent, you are then on the top of the rock. This rock might easily be buoyed, it is in the shape of an egg, deep close to it has eight feet water on its upper part, and lies nearly two cables' lengths from the nearest shore.

The anchorage within the rock is good and commodious. I sounded within half a ships' length along the adjacent shore in from five to six fathoms, as well as along the island of St. Andrea. The best anchorage in the port of Gallipoli is as follows:—Blind rock N.b.W.; Cupola of the convent of Capochin friars S.E. ½ E., south-east angle of Fortification of town S.b.W. ½ W., end of small island near the north-east angle of town just shut in with the south end of St. Andrea in six and a half fathoms.

I have suggested to the authorities of Gallipoli as a cheap way of buoying this rock, to take four pieces of stone, suspending each with a chain united in one centre, and sink the stones in opposite points on the four sides of the rock with a pole floating in a vertical position by a flat piece of wood and a centre chain.

It would be of great service to the navigation of this coast, if a lighthouse was placed on the island of St. Andrea, and another on St. Maria de Leuca.

(Signed) E. J. Carpenter, *Commander.*

Nautical Description of the Coast of China.—*The North-East Part of the Chusan Archipelago.—By Lieutenants Millbank and Nolloth of H.M.S. Childers, Commander G. Wellesly.*

(Continued from p. 334.)

Vessels bound for Shanghai, and not intending to call at Chusan or Ningpo, should pass to the eastward of the Chusan Archipelago, and make the Barren islands, which are in lat. 30° 43′ N., and long. 123° 7′ E. From hence the Amherst rocks, at the entrance of the Yang-tse-kiang, bear N. 58° W., 47½ miles.

* The Directions say "Between the Isle St. Andrea and the inner islets are seven and eight fathoms of water, and more to the north are from six to thirteen fathoms." *Directions for the Eastern Division of the Mediterranean, p. 2:—By J. Purdy, printed for R. H. Laurie, London.*

The Barren rocks are three in number, about 50 feet high, lying nearly east and west, and are three quarters of a mile in extent. To the south-eastward of the eastern rock, is a rock awash, distant from it 2 cables.

S. 31° W., 20½ miles from the Barren rocks, is Leuconna, which appears from the southward as three abrupt and round topped hummocks.

S. 24° W., 19·8 miles from Leuconna, is Monte Video, or Wongshing shan, in lat. 30° 7.′8 N. and long. 122° 46.′2 E.; it has a bold and precipitous appearance, and is nearly square. It has a remarkable white cliff, which shows very distinctly when the island bears N.W. by N.

N. 74° E., 5 miles from its summit, are four rocks, called the Four Sisters; and N. 78° E., 9 miles, are two rocks called the Brothers. There is a safe passage between these rocks and Monte Video, and also between the rocks themselves, the depth varying from 30 to 40 fathoms in the vicinity of these islands.

Westerly from Monte Video, is a chain of islands extending to Taeshan, called Fisherman's chain. Vessels passing to the eastward of these islands, and bound to Chusan or Ningpo, should make Monte Video, then pass to the northward of Fisherman's chain, and between it and the large island of Tchinsanna.

The Beehive rock in this channel bears from Monte Video, N. 17° W., 14½ miles, and from Leuconna, S. 69° W., 12½ miles; it is about 35 feet high, with a rock awash 3 cables to the eastward of it, otherwise the depth of water is from 14 to 17 fathoms around it.

W. by N. from the Beehive is the large island of Tchinsanna, having several smaller islands on its eastern and northern faces. The channel between it and Taeshan is 5 miles wide, and safe. Tchinsanna is 8½ miles long from east to west, having good anchorages in both monsoons. Having passed Tchinsanna, vessels will proceed according to the directions given for the Chusan Archipelago, or by those for the passage between Square island and Shanghai.

Northward of Tchinsanna is Peenchowa. It has several islands around it, and between it and Tchinsanna; it is next to Tchinsanna in size, being 6 miles from east to west, and will also afford shelter in either monsoon. Off its north-east point is a rock awash 5 cables distant.

The islands of Chintsien-shan and Leeseu-sa lie to the eastward of Peenchowa, bearing from the Barren islands S. 77° W., 17 miles, and from Leuconna N. 21° W., 18 miles. Between Leuconna and Chintsien-shan, is the Childers rock, which does not always show. When on it, the peak of Chintsien-shan bears N. 9° W., the Barren islands N. 70° E., and Leuconna S. 15° E.; the lead gives no warning of it, the depth being 24 fathoms close to.

The two islands of Chintsien-shan and Leeleu-sa afford very good shelter in both monsoons. The former from the southward appears of an equal height, the latter more rugged, the highest part being at its north-east end. There is fresh water at the eastern end of Chintsien-shan. In the bay on the east side of Leeleu-sa, is a rock which only shows at low water spring tides. It lies nearly in the centre of the bay. When on it, the highest part of the rock close to

the eastern point of the bay is in line with a conical hill over the western point of Chintsien-shan. Should vessels be caught at anchor under these islands with a south-easterly wind, they might run through between them, taking care to keep as *close as possible* to the shore of Leeleu-sa, as there is a patch of three fathoms in the centre of the channel, and three wash rocks further to the northward.

The bay on the south side of Leeleu-sa is smaller than the other, with deep water at the entrance of it; the best anchorage in it is a little to the eastward of a rocky point which juts out in the centre of the bay.

Eight miles to the north-west of Chintsien-shan, is Saddle island, and midway between them is False Saddle, forming the northern boundary of the Chusan Archipelago. The two largest of the northern group are saddle shaped, about 800 feet high, and of similar appearance when seen from the eastward. The northernmost island is in lat. 30° 50′ N., and long. 122° 41′ E.

To the south-west of North Saddle, are the long and narrow islands of Tungluh hwa and Seaoluh hwa, which are scarcely detached. These islands afford anchorage, but not so good shelter as under Tchinsanna, where vessels ought to stop, should night or thick weather render doubtful the making of the Amherst rocks, which are distant from the northernmost Saddle island, N. 42° W., 24 miles. Having made and anchored close to the Amherst rocks, follow the directions given for entering the Yangtsekiang. The tides throughout this group are regular, the flood sets north-west, and the ebb south-east.

Fragments from the Dardanelles.

(Continued from p. 450.)

Tchanak Kaleh ought to be pictorially honored at Burford's Panorama in Leicester-square. It affords an extensive scene, which would be pleasing and attractive enough to the sight-seeing Londoners; possessing as it does, adjacent or self-contained points, offering every variety for the artist's pencil; hills, valleys, and plains; woods, sands, and shipping, and winding foaming waters; wooden houses of all hues, countless tents, and stone structures, and mosques, and minarets, and fortifications, and a long line of Consulates and Consular flagstaffs, supporting from morn till eve the national colours of the wind-bound. These Frank consulates, by the way, monopolize the whole beach, till every twelvemonth, or nearly so, a *yanghin* or conflagration for a time clears away a few of them; they are literally within a boat's length of the stream; and behind them, inshore, runs "the Strand," famous for its crockery shops and half-a-dozen convenient wine stores, where *sherrab* may be bought at the rate of two-pence or three-pence the bottle. And not bad stuff either, barring occasionally a flavour of resin. It is in reality very much better than the French *vin ordinaire*, and therefore old stagers in the Strait rattle often enough the door-rings (knockers being unknown) of the bankside wine merchants.

Burford might, in truth, make a glorious affair of Tchanak Kaleh; for instance, by introducing Admiral Duckworth forcing this far-famed passage in 1807, when and where, be it remembered H.M.S. *Windsor Castle*, Capt. Boyles, received in her main-mast a granite shot, weighing no less than eight hundred weight! On that occasion Duckworth's fleet consisted of the Royal George 110, (flag-ship,) Canopus 80, Pompée 80, Repulse 74, Thunderer 74, Standard 64, Endymion 40, Active 40, the aforesaid Windsor Castle 74, and the Meteor, — guns. Thus, Duckworth's fleet carried about 650 guns; the batteries not possessing more, and the ships having to run the gauntlet in a space where Asia and Europe approach each other so close as not to share a mile's breadth of water. Well, in 1807, on the 19th of February, these ten English men-of-war, (there were no steam-frigates in those days,) ran blazing away between Tchanak Kalessi where we are now at anchor, and its *vis-a-vis* Kilid-ul-bahr, (the old castles.) Sir Sydney Smith in the Pompée took and preserved a gun-boat and corvette in the little bay before the present Consulates, and burnt also divers craft of all sizes, after a smart resistance. H.M.S. Active destroyed a gallant frigate on the European side which had for some time made a stand against both the Pompée and the Thunderer. Turks are any thing but cowards. An Ottoman 64, was destroyed at *Pesquies Point* with ten other sail; and some of the batteries on the promontory of Nagara were "boarded" and captured by the marines and blue jackets of the rear division. These and other exploits occupied altogether 8½ hours, from 8h. 45m. A.M. to 5h. 15m. P.M., when the whole squadron made sail for, and *next evening reached, Constantinople*; got the worst of "a brush" at the island of Prota in the Sea of Marmora on the 27th of February, and then on the 3rd of March prudently came back again to the Dardanelles, passed out at once into the Archipelago, and as to their fortnight's work, made a return to the Admiralty of 42 killed; 235 wounded; and 4 missing from H.M.S. Standard, Captain Harvey.

In the present day the fortifications are stronger than in 1807. In Colburn's U. S. Magazine for May, 1843, is an interesting paper "*On the Defences of the Dardanelles and Bosphorus,*" (with a map) by Col. G. F. Herman, "employed on particular service in the east." The four Castles included, there are now 17 batteries in the Dardanelles, in a space of 15 miles, having altogether 670 guns, 45 of which are of the calibre of 1,100 lbs.!! These monsters have recently been fitted with carriages. The works are situate between Sestos and the Archipelago.

It is almost impossible to get admission into the fortifications of the Dardanelles, but a good view of most of them may be obtained from the mast-head in going up or down the Straits. As for the town of Tchanak Kalessi itself, there is little in it worthy attention; but the *veshten* of the dancing Dervishes may be witnessed with some satisfaction, and a visit paid to the Greek Church, Jewish Synagogue, and Turkish baths, and some *djamee* or mosque. To walk about and outside the place for an hour or two, up one street and down another, is the only way to stumble upon its beauties; now a pretty fountain, next a verdant garden, and cluster of plane trees, a glimpse of the river, then a curious building and so on, will unexpectedly appear; and gloomy as many streets are, the main one is pleasing enough (it runs at

right angles from the shore) its houses have a Swiss appearance, and the shops are very clean, neat, and attractive. And the costumes of this pipe-smoking people, and the novelty of every thing around him cannot but amuse the tar, or the traveller, though he may indeed miss much of the *finish* which every thing now seems to wear in more western lands. But it is as pleasant to see matters in the rough now and then, as to patronize a *pic-nic* after a *Speaker's dinner*. Novelty and change is ever an agreeable order of the day, and though *inter alia*, the language sounds quaint in these parts and interpreters are scarce, pocket-vocabularies enough may be got at Stampa's in Constantinople, or at Malta, (through Mr. Burnside, the Yacht-club Agent at Leghorn,) to obviate most of the pressing difficulties likely to be encountered by the stranger in Turkey.

Immediately above the Old Castles, Tchanak Kalessi and Kilid-ul-bahr, the strait (which runs thence about south-west in its *downward* course of twelve miles to the sea) makes in its *upward* course a sudden sheer to the left or westward, and forms a reach of about a league in length, or rather more, ending in the Bay of Maida, whence the land again resumes a north-east direction, and preserves it (with the variation but of a point or two) into the Sea of Marmora. The whole strait from sea to sea, from the Grecian Archipelago to the Sea of Marmora, is about forty miles in length, varying in breadth from a mile to a league, a little more or less. *There are shoals near Nagara.*

October 14th.—At 2 P.M. with strong breezes from E.N.E. to N.E. wayed from our anchorage off the English Consulate, and in three hours brought up for the night in ten fathoms, in Captan Pasha Bay, on the Asiatic side of the Strait, below Point Nagara; the town of Maita, or Mito, (as Wittman writes it,) on the European shore, three miles above Kilid-ul-bahr, ("The Lock of the Sea,") bearing nearly N.N.W. by compass, on our left; H.M. cutter Hind, Admiral Rowley's tender, astern of us; Point Nagara with its fort and minaret ahead, and facing its sister-battery on the European side; a gaudy house or two, a few insignificant dwellings, and a capital watering place on our right on the eastern shore; and the whole view from this snug anchorage bounded by heights. *(In this bay is the new Mediterranean Lazarett.* The Turks, though Fatalists, are at last converted to Quarantine.)

Here we discharged our pilot (*Klahvouz Gaymesee,*) and his boat and five men, after paying him 120 piastres,—about five and twenty shillings—for his services from *Tchanak Kalessi,* the inner castle of Asia. Mehemet gave his receipt by dropping his finger in the ink and smearing from right to left the paper we had written for him.

October 15th.—Wayed at 5h. 30m. A.M. and in company with H.M. cutter Hind, the merchant brig Tiber, (Capt. Candler,) and the Brisk, schooner, soon weathered Point Nagara. After rounding this point, there is a strait coast for a short distance and then a Bay on the Asiatic shore, the Bay of Abydos* immortalized by Byron's poem, which with the

* On the sixth of March 1838, eighteen months after the date of this diary, I happened to be again in this part of the Dardanelles, and sailed from Tchanak Kalessi, where for a short time I had remained ashore at Cacoucho Russo's, just as Mr. Charles Fellows rode into the town, from the Troad. (Fellows' Asia Minor, 1839, pp. 72—83). This traveller who has since formed one of the Xanthus Expedition,

usual licence, locates a Pasha where never Pasha lived. Here at 9 A.M., while standing in on the larboard tack, under reefed fore-top-sail and lower sails, with main-top-mast struck, we split the fore-stay-sail, and immediately afterwards, the last cry of the leadsman being "No, bottom, Sir," we grounded on a bank rather more than a quarter of a mile from the Asiatic shore, the European Fort called *Bovali*, situate opposite Point Nagara, bearing N.W. We immediately furled all sail, got out the boats, sounded and found deeper water ahead, carried out an anchor and kedge on the starboard bow and beam, and again setting sail worked with a will, but could not succeed in heaving off till the afternoon, when however, we *did* heave off, and got into ten fathoms for the night, breeze still continuing with heavy swell. At 2 P.M. we had received offers of assistance from the Hind, which vessel had brought up a few miles ahead of us, and sent down a midshipman and Greek pilot to our aid; before, however, they rejoined the Hind with our answer, we were enabled to communicate by signal that we could do without the dozen hands about to be dispatched to us, as our own efforts were gradually getting us out of our dilemma. We were nevertheless destined to remain at the anchorage from Saturday till Tuesday, speculating about the bridge of Xerxes, Byron's swimming feat, Leander, &c.

There are no batteries whatever northwards of Sestos and Abydos. Gallipoli is about 17 miles above Sestos, both on the European side.

October 16*th*.—Remained at anchor all day in ten fathoms above Cape Abydos, on the Asiatic side of the strait. Heavy swell and blowing hard from the north-east, sent down top-gallant-yard; struck main-top-mast, and fore-top-gallant-mast, and veered cable. *Mem*. Had a fine turkey for dinner, which had cost us but twenty-pence at Tchanak Kalessi. Not a house visible near Cape Abydos. Quite as *triste* as Salisbury Plain. This is our 55th day from England.

October 17*th*.—Gale has continued all night. At 8 A.M. a small Turkish frigate passed down under royals, which she took in when abreast of our berth; exchanged colours; weather moderated at sunset; re-hoisted top-gallant-mast, and shortened in 40 fathoms of chain cable. All ready for another start. Hurrah for Stamboul!

October 18*th*.—Wind still at north-east, steady breeze and finer

says that on that very day, in his "walk of four miles N.E. to Abydos, he never felt the wind more cutting or violent;" a wind, however, I may mention, which rattled us down to the Doro Passage in "less than no time," as Jack says, and thence as rapidly clear of "The Arches" into the Mediterranean. There was snow in the Dardanelles next day, 7th of March.

Of the over-rated ruins of Abydos, Mr. Fellows says "Of this place so little trace remains that I passed over it, and for a mile and a half beyond, and gave up the search as vain. On my return, I noticed broken pottery and small stones of worked marble in the ploughed fields, at about the place where the town probably stood. Thus directed to the spot, and by seeing higher up on the opposite side of the straits the European promontory of Sestos, I traced the foundation of the wall of a considerable building down to the coast. Passing up a ravine, aad ascending the hill overhanging this formerly castellated promontory, I found many remains, valueless except as leaving a trace of former inhabitants. A tomb had, a week before, been discovered on the height, containing a skeleton. The Greek Consul had discovered another, with three specimens in terra cotta, of high antiquity and peculiar costume."

The sponge which is plentiful on this coast, is not ripe for use in March, the fleshy coat of the animal still covering it in that month. The Turkish word for sponge is *sunguer*.

weather. Wayed at 4h. 45m. A.M. and beat up towards Gallipoli, situate on the European shore, nearly opposite Lamsaki. At 7 A.M. crossed fore-top-gallant-yard, shook out a reef in the fore-top-sail, jib, and mainsail, and set main-top-sail, and fore-top-gallant-sail. H.M. cutter Hind passed down, also the Austrian steamer Maria Dorothea, Capt. John Ford, from Stamboul to Smyrna, who brought us letters from Pera, which (the swell being heavy) he lashed to a log of wood, and hove overboard, and our boat picked up. At 9 A.M. the breeze still freshening we took in the gaff-top-sail, and from that time throughout the day had to make and shorten sail occasionally. At 9h. 30m. P.M. we had, in seventeen hours from Abydos, beat up beyond Gallipoli and Lamsaki, a distance of six leagues, when the few hours of calmer weather we had thereabouts experienced were succeeded by squalls, and we were ultimately compelled to bear up, and run for shelter down the European shore, where there is a shoal, into Gallipoli roads; the weather still becoming worse. We here anchored out of the current, about 10 P.M. astern and to leeward of H.M.S. Volage, 28, with several sail near us. "Wherever wood will float, there find I that flag of England," said Napoleon, and the Turks may well say the same.

October 19th.—Wayed at six o'clock this morning in company with the Volage frigate, and a few merchantmen. After beating towards the sea of Marmora for two hours, we were all compelled, Her Majesty's ship excepted, to bear up once again for Gallipoli. At 1 P.M. went on shore, and found the plague had broken out in the place, and was taking off a dozen a day. Some Genoese captains just arrived from Odessa, report that this *typhus gravissimus*, as Dr. Madden calls it, was rapidly increasing at Constantinople when they passed through the Bosphorus, and that in that city during the present month 2,400 people had died of it in the space of twenty-four hours. Of course, we have yet no means of testing the accuracy of this report. The Turkish word for plague is, *You-moor-jack*, the Italian *Peste*.

October 20th.—Blowing a gale at north-east, remained at anchor. Observed a Turkish brig of war and frigate moored off Lamsaki, on the Asiatic shore, of which town, which is more to the south than Gallipoli, we could see but one minaret, "pointing heavenward," above the roofs and trees.* About two miles higher up the strait than Lamsaki, and more nearly opposite Gallipoli is the village of Tchardak, or Khardack, or Khardi-kioi.

The Dardanelles hereabouts resembles a reach in the Thames *minus* minarets, etc. The present anchorage we have taken in Gallipoli Roads is good holding ground and distant about a mile from the town; the old Castle, which seems in a hopeless state of ruin and is situate

* In the middle of December, 1837, I landed at Lamsaki, when bound once more to Constantinople. The town is a quarter of an hour's walk from the landing-place, and the route horribly muddy. In the *meidan*, or square of the place, good bread, (*eckmeck*) may be obtained, as well as meat, (*et*,) I saw no spot where water, (*su*) was obtainable, and all things considered, I differ from those who recommend the anchorage of Lamsaki in preference to Gallipoli. Having, however, beat up to Lamsaki, it does not follow you can ensure gaining Gallipoli. We tried in 1837, in a brig, and after several tacks, and "artful dodges", fell a mile to leeward of our first position. The current is very deceptive here.

near the mole, bearing from our berth N.E. ½ E. Gallipoli has no towering hills behind it, and the houses are not "the gayest of the gay" being chiefly of wood, having lead coloured fronts, and flaring red roofs overshadowed here and there by trees. The line formed by the town may be north-west and south-east; and the Castle and the Mole, upon the latter of which there is an oil light after sunset, stand about the centre. A short distance from the mole is the *Tersaneh* or Arsenal, and eight or ten minarets point out the different positions of as many mosques. A beautiful square-built fountain is at the back but close to the mole from which our boats procured to-day (and *gratis*) five casks of water, "the limpid stream" being ever dear and scarce at Constantinople in time of plague, which pest as I have already said is now raging in the Capital.

Gallipoli Bay is roomy enough, but its shores are not very inviting. Trade cannot be here very flourishing. And yet this was the first conquest of the Turks in Europe! One man-of-war might now shell the place to atoms!!

Oct. 21*st.*—*The anniversary of Trafalgar!!*—We are still at anchor off Gallipoli, calm, with heavy rain. At this place much biscuit is made for the Turkish Navy. The Bazaars are worth seeing.

* * * At noon got under way with a very light breeze in our favour (course by compass E.b.N.) The part of the town running parallel with our course stands on the summit of rocks rising on our left from the water's edge. To the eastward of this part of the town is seen a lighthouse (*fanal*), then a little bay, and again on the easternmost headland of the bay another lighthouse, and opposite thereto on the Asiatic coast is a third. A little to the westward of the first European lighthouse is a small Turkish burial ground close to the stream of the Strait, and at the head of the bay stands a pretty octagonal white building, in a garden surrounded with low walls and backed by luxuriant trees and a few cultivated fields. A sort of lodge appears at the eastern extremity of the garden walls beyond which at some little distance are, to all appearance, two fountains; and on the brow of the hill another small burial ground unenclosed. On the hills north-east of the town are some extensive ruins, low and unconnected. A third watering place or fountain to the westward of the white octagonal building at the head of the bay is sighted as soon as the eastermost point of the range of rocks where the first lighthouse is built is passed.

Shortly after leaving Gallipoli, the island of Marmora, whence the sea below Constantinople takes its modern name, became visible right ahead, indistinct on account of its distance from us—thirteen leagues, resembling a dark and concentrating cloud sitting on the waves. From Gallipoli into the sea of Marmora the breadth of the Strait considerably increases and along the line of shore both of Europe and Asia picturesque hills and mountains in every tint of brown and blue, meet the eye of the voyager. Aquatic birds are scarce in the Dardanelles.

The European shore just above Gallipoli is comparatively low, and in this part of the Strait is a shoal which according to the chart and *Purdy's Directory* (p. 167) may be avoided by keeping the two light-towers of Gallipoli in sight. There are some rocks also at the back of the town which also are to be guarded against, especially in beating.

Were, however, dangers here more numerous than they are; what with minarets, towers, cemeteries, and so on, it would be easy to find good marks enough to determine their exact position.*

In the afternoon we again saw the Maria Dorothea, steamer; she now called at Gallipoli on her way up from Smyrna to "the Golden Horn." On going alongside we heard the news confirmed of the plague raging at Constantinople, and were told that after this trip the steamer would take cabin passengers only from the Capital, and none at all from Gallipoli (our present anchorage); and Captain Ford added that in his last passage, when he spoke us off Abydos, he had the misfortune to find, before he reached Smyrna, three persons on board suffering from the plague! Pleasant companions for tourists!! It is expected this rainy weather will increase the intensity of the scourge, already terrific enough, since it turns out to be strictly true that from one to two thousand people are now being carried off by it daily at Constantinople, the poet-praised but pestilent "City of the Sultan."

Oct. 22*nd*, 1836.—Last night we had a fine moon till after midnight, and continued our course under studding sails, favoured by a light breeze, which however sent us ahead, owing to the current, but two knots an hour. Still at 4 A.M., this morning our ill-luck returned, a heavy squall at that hour took us aback accompanied by floods of rain, pouring down "like cats and dogs," while all around was as "dark as pitch." Knowing our position almost to an inch we determined to continue working to windward, and having close-reefed were soon plunging through a tremendous head-sea, where but recently there was scarcely a ripple. We had passed Cape St. George on the European shore, and now made but short tacks in order to keep that coast on board. Later in the morning we had the wind at W., S.S.E., and N.E., gale and sea increasing; and at last when nearly out of the Strait we were again compelled to bear up, and under snug sail to run back nine leagues to Gallipoli where we anchored for the *third* time shortly after noon, as drenched as water rats, the rain having continued without intermission for very many hours.

People are excessively mistaken about the climate of the Dardanelles and Constantinople. In October the rains generally set in, then follow frost and snow, and the wintry season prevails off and on till March, when fine weather again comes upon you as if Dame *Nature*, determined to do double duty, had suddenly donned "seven-leagued boots" and decided on *forcing* into fragrance and freshness everything under her dominion at the shortest notice; and "by the Beard of the Prophet," she here succeeds well enough and marches along at a rail-road pace, and then the sun begins to shine in right-down earnest and each hu-

* The following recently appeared in the London Papers (1844):—"*Caution to Mariners.—Soundings in the Sea of Marmora reported to be incorrect.*—The Montefiores, Captain Duffill, arrived at Falmouth from Odessa, reports that in beating down the Sea of Marmora towards Gallipoli, more generally known as the Dardanelles, in lat. 40° 24′ 50″ N., long. 26° 39′ 45″ E., Gallipoli bearing W.S.W., 8 or 9 miles distant from the shore, three-quarters of a mile from the north shore, sighted the bottom under the ship, and found but 4 fathoms water, when his charts, two in number, indicated 21 fathoms close to the mainland. Captain Duffill also states that the opposite shore is also incorrectly laid down, making the channel narrow and dangerous for 9 or 10 miles east of Gallipoli."

man heart as well as "mother earth" is warmed, and rays flash from mosque and minaret, and without doubt *Stamboul* perfects its claim to the proud title of *A Fairy City*.

(To be continued.)

Bottle Papers.

(Continued from p. 828, vol. for 1843.)

We have now a fresh batch of these documents for our readers. The first (56 *b*.) is from Captain Sir James Ross, on his return from his voyage to the Antarctic regions. On applying it to the chart in our last year's volume p. 181, it will be found to have followed the old track to the northward and eastward; but starting as it has from the neighbourhood of the Azores, it is an interesting addition to the former.

The second (40*b*.) is another from the same officer some days later, having taken about the same course as those immediately to the northward of it. We hope that the Master of the "Earl of Devon" despatched the bottle with a fresh paper on its voyage after relieving it of its first cargo. Such opportunities give additional interest to these experiments, as should the bottle be a second time found we have thereby a point given through which we know it has passed in its course. We hope these will meet the eye of the officer by whom they were despatched.

The third (52*a*) has followed the usual course of the equatorial stream. The fourth (56*a*) affords a curious instance of the chances to which these messengers are subject. It is thrown overboard about N.N.W., above 400 miles from the Azores, and after passing easterly round them to the southward had either to cross the Sargasso Sea, or by drifting further south to get into the equatorial current, and is drifted to Porto Rico. A copy of the original paper was transmitted to us by Captain F. Austen, R.N., but a translation of it into Spanish appeared in a local Spanish paper, a writer in which has made the following remarks:—"From the contents of the above translation, the bottle found on the beach off Isabella in lat. 18° 29′ 40″ N., and long. 66° 57′ 35″ W., has been in the sea five years, ten months, and three days, in which interval although some current has carried it along, it has also been exposed to the effects of wind and sea, which assuredly would carry it to the Lucayos, as the northerly and north-west winds have been very strong this winter, and particularly the last month, which we may presume brought it hither.

"We venture much in giving this brief opinion. If a vessel navigated only by her reckoniug, compared her position by it, with that deduced by observation, considerable errors would be found,which had not been supposed until then; how then can the course of a small light body, for such a length of time be calculated, exposed as it has been, as the plaything of the waves? Nevertheless we give the course and distance which it has followed, supposing there to be no wind, and the sea undisturbed all the time, a thing impossible for five consecutive years.

We therefore conclude that it is a thing more curious than useful to navigation. Course S. 44° W., distance 2,400 miles."

We quite agree with the writer of the foregoing, that these matters are more subjects of curiosity than utility to navigation. They owe all their interest to curiosity, to a speculation where the bottle will go to; what course it will take from the place where it is launched overboard? Still it is a harmless curiosity. That it will obey a surface drift whereever that may lead it to, there can be no doubt, but to suppose that a ship will be drifted in the same manner would be absurd. They form, however, a tolerable index to the surface drift of the ocean, even if it be more a matter of curiosity than utility to navigation.

The last bottle (86*a*) has drifted from Hudson Straits to the Faroe Islands shewing an easterly drift of the surface water in those high latitudes.

(No. 56b.) *Castletown, Bearhaven, June 28th,* 1844.

Sir.—I beg to send you the enclosed document which was picked up on this coast close to Black Ball Head, on the 25th inst.; distance from Sheep Head, which is in lat. 51° 34′ N., long. 9° 51′ W., about ten miles.

I remain Sir, &c.,

To the Secretary of the Admiralty. R. Puxley, *Agent to Lloyds.*

P.S.—I had like to forgot to say that the man's name, who picked up the bottle in which it was contained, is Timothy Neill and lives in a village called Gurranes. R.P.

"The bottle containing this paper was thrown from H.B.M. ship Erebus, 14th August, 1843, in lat. 37° 49′ N., and long. 34° 30′ W.

"Whoever may find it is requested to forward the paper to the Secretary of the Admiralty, London, together with the date, and a notice of the latitude and longitude where found."

"James C. Ross, *Captain.*"

(No. 40b.) *New Ross, April, 24th,* 1844.

Sir.—I beg leave to transmit you the enclosed document which was picked up by me on the voyage from Leghorn to New Ross on the 10th of April 1844, at noon, in lat. 43° 49′ N., long. 11° 05′ W., and will feel much obliged by your acknowledging its receipt by return of post.

I am Sir, &c.,

Henry Tonkin,

Master of the Schooner "Earl of Devon" of Penzance.

To the Secretary of the Admiralty.

"The bottle containing this paper was thrown from H.B.M. ship Erebus, 22nd August, 1843, in lat. 41° 52′ N,, and long. 25° 50′ W.

"Whoever may find it is requested to forward the paper to the Secretary of the Admiralty, London, together with the date, and a notice of the latitude and longitude where found."

"James J. Ross, *Captain.*"

(No. 52a.) *Bahamas Grand Cay, Turks Islands, March 13th,* 1844.

The enclosed was found during the last week in February, 1844, at the

mouth of a creek, on the north side of the Middle Caicos, by Alexander Delaney, and by him handed to the undersigned to be forwarded.

HORATIO STUBBS,
Receiver Col. Duties, and Dep. Secretary.

"Her Majesty's ship Calliope, 28 guns, 28th of January 1843, lat. 19° 12′ N. long. 30° 49′ W. From China to England, left the Cape 28th December, 1842, and left Ascension January 14th, 1843. Wind easterly, 6 bs, crossed the line January 17th 1843. "All well on board.

"AUGUSTUS L. KUPER, C.B.
"*Captain.*"

(No. 56a.) *Ponce Porto Rico, 10th April,* 1844.

The enclosed account is the Spanish translation of a paper found in a bottle which was picked up in one of the Bays of this island, on the 18th ult., the situation of the place is correctly stated where it was found.

I am, &c.
W. A. MITCHELL.

To the Honorable Secretary
of the Lords of Admiralty.

10, *Alexander Square, Thursday, P.M.*
Bottle Paper, Andromache.

SIR,—The accompanying has been handed to me, it is from a N. American paper, though without date; it came by the last packet. I know of no channel so orthodox as through you, to make it known to the world.

Yours &c.
HORATIO T. AUSTIN, *Captain R.N.*

"The following is a copy of a scrap of paper picked up at the mouth of the harbor of Isabella, on the north side of Porto Rico, in lat. 18½° N., lon. 67° 20′ W

May 15th, 1838, 8 *P.M.*

"Her Majesty's ship Andromache, at sea, at latitude 47° 10′ north, longitude 34° 50′ west, out six days from Plymouth, left Scilly at 9 P.M. of the 10th. inst. During the last two days have experienced a strong southerly current of one knot per hour. This bottle is thrown overboard to ascertain the set of the current, and it is requested that the person into whose hands it may fall, will cause the circumstance with particulars to be published for the benefit of navigation."

Here follow the names of the captain, lieutenants, &c. but they are so illegible that we do not attempt to copy them, except that of G. Peacock, master; D. Riley, captain of 24th regiment; and Edward Hooker, lieut. of marines, passengers to Quebec.

(No. 86a.) *Lerwick, 14th June,* 1844.

SIR.—The inclosed was forwarded to my late father by the Governor of Faroe, copy of whose letter I annex.

I am, &c.
C. OGILVY.

To the Editor of the Nautical Magazine.

Government of Faroe at Shorehaven, 30th May, 1844.

SIR,—On the 25th inst. the enclosed paper was found in a bottle between the Islands of Stromoe and Waagoe, western part of Faroe islands, and according to the desire of the writer, I hereby send it by the first opportunity, begging you to forward it to its destination.

I am, &c.
(Signed) PLOYER.

To Charles Ogilvy, Esq.
His Danish Majesty's Vice-Consul at Lerwick.

Honble. Hudson's Bay Company, Barque Prince Rupert.

This bottle was thrown overboard at the mouth of Hudson's Straits, on 21st July, 1843, in latitude 61° 20′ 00″ north, longitude 63° 40′ 00″ west, in order to ascertain which way the current sets.

Whoever finds this will greatly oblige by reporting it to the Editor of the *Nautical Magazine*, at W. H. Allen, & Co. Leadenhall Street, London.

D. J. Herd,
Commander.

All well.

Nautical Rambles.—The Leeward Station during the War.

Port Royal and its Associations.

(Continued from p. 457.)

A well contested action of four hours and a half (in which, as a passenger, I had the satisfaction to participate,) was fought by the small Colonial brig Charles, commanded by a gallant old seaman, named Cromarty, off Pedro Point on the south side of Jamaica; it being calm nearly the whole of the time. The privateer engaged was the two-topsail, noted, schooner Vengeance, alias Juliana, some tons larger than the brig; having a long brass 18-pounder, traversing on a circle amidships, some smaller guns on the broadside, musquetoons, and swivels; with a picked crew of ninety-five men, principally Frenchmen, lately belonging to the Imperial, ship-of-the-line, destroyed by Admiral Sir J. T. Duckworth, off the city of St. Domingo. Having the advantage of sweeps she ranged up close on the larboard beam of the brig, and engaged under the "bloody flag," (no quarter!), which was suspended from her fore-rigging, and a huge tri-colour at her peak! The little brig (a beautiful yacht-like craft) mounted six 9-pounder cannonades* on carriages, and her stock of fire-arms amounted to four muskets; and the only sword belonged to the Mid. The crew, including the captain, mate, (Sutherland, an old follower of Lord Nelson,) the master of a West Indiaman, and a midshipman passengers, amounted to thirteen, the majority being "new" negroes. After every cartridge, wad, and shot had been expended, whilst yet calm, she was boarded by the Frenchmen, and obliged, of course, to yield. A general slaughter by the Spanish part of the enemy's crew, was alone prevented by the firmness of the boatswain of the privateer, a Maltese, who had long served in the British navy.

Having had my share in the defence, of course I cannot enter into further detail; the gallant old skipper, though ill with a fever, did his best; and I think the length of the contest at close quarters will sufficiently attest that the British flag was not dishonoured.

Those who knew the old Falmouth packets, will recollect what compact little ships they were, apparently more calculated for the smooth water sailing in a lake, than to contend with the rough seas of a boisterous ocean; but circumscribed as their decks must have been on seve-

* These were discharged with a "fire-stick," there being neither locks nor matches.

ral occasions, they successfully beat off a much superior force, and even in a few instances have captured their opponent.

One of these small vessels (the name of which I have forgotten) fought a desperate action, with a French privateer, in her passage to Port Royal, and beat her off. She had a number of passengers on board; among whom were, Mr. Jackson, a store keeper of Port Royal, and Mr. Thompson, a gentleman of fortune, of the north side of the island. These gentlemen gallantly assisted in the defence, and both those named, were badly wounded; the latter severely so in the hip by a grape-shot. He was a fine young man, but was rendered a cripple, and ultimately died from the effect of the wound. Mr. Jackson recovered. I regret not being able to record the name of the gallant Captain of the packet.

H.M.S. Bacchante, a corvette of the largest size, when returning from a long cruise in the Florida Channel, was nearly becalmed off Cape St. Antonio, the west end of Cuba. The main-top-mast being badly sprung, it was considered a good opportunity for examining it, and if found necessary to reef it, by cutting a new fid-hole above the spring, which was not far from the heel, in order that the mast might sustain the pressure of the sail in the beat up to Jamaica against the trade wind. It so happened, too, that, the ship was short of provisions; and as the biscuit was found to be much deteriorated by weevels the whole remaining stock was got up, and spread on a sail upon the quarter-deck, for the purpose of separating the whole pieces from the dust.

Before these necessary duties were quite completed, a sail was descried, coming down before the wind. At first she was pronounced to be one of the Falmouth Packets, but being end on it could not be determined whether she were a ship or brig, In a short time, however, this opinion was given up, and it was now conjectured that she was an enemy's vessel of war, and as she did not answer the signals made to her, there seemed to be every probability of this being correct; she still, however, kept a steady course.

The bread was soon restowed, and the main-top-sail hoisted. The breeze being light, all sail was set, on the starboard tack, in order to cut her off. This, however, was not effected, as she passed ahead of the ship, running alongshore. She proved to be a large brig of war, having the tri-colour at her peak.

The action commenced at "long balls," and continued so until the brig had been brought on the lee bow of the ship; when, finding escape impossible, she rounded to on the starboard tack; the latter by this time having dropped down abreast of the Frenchman, the fight was continued, with much animation on both sides, for rather more than half an hour, when the enemy made an effort to push into the formidable line of breakers that were roaring, in unison, with the cannonade, a short distance ahead. A few more well directed shot, however, brought the huge swaggering ensign down; and when taken possession of she was nearly in the wash of the spray of the reef!

The French captain, a man of science, seemed, by the course he followed, to have been infatuated. Had he hauled his wind at first, as his brig sailed better than the corvette, he would have escaped probably during the darkness of the ensuing night. Another false manœuvre

was allowing the enemy to obtain the wind of him; it was then too late to think of escaping; and his awkward attempt to run his vessel into the breakers was not very creditable. For the short time he was engaged, his firing was well sustained, but little execution was done. We believe this officer, since the peace, has been actively and usefully employed as a Marine Surveyor. At the time he was captured he was bound from Martinique to Pensacola, for a supply of flour, and had, so far, evaded our cruisers, by following an unfrequented track; passing to the southward of the Pedro shoals. Had he continued to pursue the same caution, by keeping on the western side of the Yucatan channel instead of rounding too closely the western extreme of Cuba, he might have had a better chance of successfully completing his voyage. At all events he would have evaded the English corvette.

After manning the prize, it was found that the prisoners were more numerous than the corvette's crew; precautions were, however, taken to prevent any untoward circumstance from occurring, and both vessels arrived safely at Port Royal; and the brig was added to the navy.

The Bacchants was a French built ship, with the scantlings of a seventy-four; flat-floored, wide beam, and of great length. Her masts, yards, and sails, were those of a sixty-four gun ship; she mounted twenty-two guns. With a strong wind her inclination was trifling; or according to the seaman's phrase, she was as "stiff as a rock;" an excellent sea-boat, sailed fast, and worked well, but required good space for wearing or tacking. In fact, she was, altogether, a very superior vessel of war of her class; a "past" ship; yet bore but two lieutenants. Her model was worthy of being preserved.

To leeward, or westward, of the Havana, the same ship,—in company with H.M.B. Elk, Captain Coghlan, smartly engaged a flotilla of Spanish gun-boats and armed schooners, which took refuge within a reef that ran parallel to the shore. Whilst the action continued, the boats attacked the Spaniards and succeeded in bringing out one of the schooners. It was late in the evening, and a further attempt was postponed until the next morning, but by that time the "birds had flown."

The Spaniards have always been esteemed for good gunnery practice in their gun boats. In the instances which gave me opportunities for judging of the correctness of the praise bestowed upon them in that respect, I may without hesitation confirm it.

I recollect that on one occasion whilst in a boat sounding in shallow water ahead of H.M.B. W—— when the boats' crew may be truly said to have embraced the "post of honour" or "forlorn hope" she became, as it were, a target for their practice, every one in her being thoroughly wet through by the sprays thrown up by the round shot! In the instance above alluded to, the Dons upheld their reputation as good marksmen, all their shots being well directed; and had the ship been stationary, she would have been severely cut up, and the gallant Captain, as it was, has reason to recollect the *brush*, for he was within an ace of losing his head, having quitted a hammock in the netting upon which he was leaning whilst reconnoitering with his glass, the instant before it was whirled away by a twenty-four pound shot! These hair-breadth escapes are common enough in action, and are little heeded, principally, perhaps, on account of the general uncertainty of human

life at all times; as also from familiarity with danger lessening the serious impressions of the awful change from life to death. I may mention another circumstance that occurred in this ship. There was a seaman of herculean frame in her, whose strength was in proportion to his bulk, and whose mildness was equal in degree to his great muscular power and courage. His name was Ogden, or Ogburn, I forget which; and he alone managed the foremast gun, a carronade upon a carriage; when this gun became heated it repeatedly upset, but was instantly righted by him, apparently without much effort: it was a curious sight to see the earnestness and ease with which this single homo performed his part, loading, priming, firing, spunging, and running out his piece, without the slightest assistance from any other person; and all executed in equal time with the others! He performed the feat of lifting up a carronade (I believe, a 12-pounder,) from the hold, placing it on his shoulder, and ascending with it in that position, up the ladder, to the deck! I have somewhere read * a remark, that it is a provision of nature (a wise ordination of the Creator,) that large men with great bodily strength, shall possess gentleness of disposition and forbearance. In the instances which have come under my observation, I have found this to be the case; but, in general, when large men (corpulent and fat) are weak in muscular power, there is found a corresponding weakness of spirit; yet such men have often proved themselves in possession of the attributes of the bully. It has also been asserted that deformed persons are extremely vain of their persons; and it has been reasoned out that, without this support, they could never endure the unfeeling indifference, or scorn of the cold, unthinking part of the world. In the whole course of my experience, I do not recollect to have seen but one deformed seaman; he was "hump backed", was a gunner's mate, and a valuable man: the only piece of vanity I observed in him was the extraordinary care he took of his huge "pig-tail", or "Q", without exception the most monstrous I have seen belonging to the genus.

The scene of the spirited exploit of the late Admiral Sir C. Brisbane, in the *Arethusa* frigate, and of the unfortunate Captain Lydiard of the *Anson*, lay a little to windward, or eastward, of the Morro castle of the Havana. We have often been within range of the guns of the fort which they battered, but were never molested.

The names of our ships which have gained renown in action with the enemy, hold a never fading remembrance in the minds of men-of-war men. There is nothing in this to excite wonder, the exultation of success in battle is a natural feeling, at least we may presume so from its universality; and it will always have its sway, whatever regret may be associated with it, respecting the inhumanity of fellow-men waging destructive war against each other, often upon insufficient grounds; and the excusable pride which is felt by the immediate actors is transmitted to their successors in the profession, and treasured up, as a precious gift, with the enthusiasm natural to the open and ardent minds of those whose

* The learned historian Seyer, (Rev. S., M.A.) writes this part. "Red", the distinction is worth preserving. Indeed we believe it has been admitted that the orthography of our language requires revision.

pursuit is that of guarding their country from a foreign foe. Among these names is to be found that of the *Arethusa*, celebrated in song, and which is associated with deeds of valour that cling around the heart of the patriot with irresistible grasp; serving to emulate the successors of the departed heroes, in the hour of strife, to follow the good examples set them.

The influence which the fame of our ships in their encounters with those of the enemy, has upon the minds of our rough tars, is surprisingly great; and from this conviction, in every individual instance where that celebrity has been conspicuously gained, the names of the ships should be perpetuated and fostered with all imaginable care; and respect for this feeling so far honoured as that none of the vessels which have succeeded to the name of those which have been thus distinguished, be employed otherwise than in the regular line of martial service. This may appear to be a trivial idea—"a thing of no moment," but it is not so, for whilst the living spark is kept from being extinguished, and thus be ever ready to be fanned into flame, and the past and the present in one connected train, to be joined to the future, the consideration must be of value.

"There is a great deal in a name." The application of this aphorism to every-day occurrences in life, and to individual notoriety, may carry a doubtful meaning, not always implying that merit exists, or is deserving of the celebrity which the voice of fame showers upon it. But with our "wooden walls" it is clear that doubt can never exist—the celebrity gained by the inmates of a ship, attaches to her *name*, and *she* is safe in the acquisition—once established, her fame becomes permanent, and is inherited ever after without the remotest chance of detraction. The renowned "Victory" sufficiently attests that, "there is a great deal in a name".

Some years ago (1823) a small work was published by Simpkin and Marshall, entitled "Naval Records, or the Chronicles of the line-of-battle Ships, &c.," in two parts. It was, however, never completed, probably from want of sufficient support, which is very much to be regretted as, independent of the historical interest attached to such a work, the professional events, though briefly touched, were extremely valuable in a national point of view, being likely to assist in keeping alive the spirit for naval enterprise and renown, which has aided so materially the acquired greatness of the country. A work of this sort, embracing the services of all classes of vessels, in separate parts, alphabetically arranged, would be of great value; and it is scarcely possible to believe that, if extensively made known, and sold at a reasonable price, it would not succeed. Under the patronage of the Lords of the Admiralty, I think there would be no fear of its remunerating the author.

The name of the *Arethusa*, which vessel opened the Revolutionary War, of course is not to be found in the book alluded to, but that of another which was pretty actively employed on the station, is. Few ships of the line performed more service, or stood more "hammering" than the old *Bellerophon;* and although her feats within the tropics were not so important as those she executed under Admirals Cornwallis, Howe, Jervis, and in two grand instances with Lord Nelson, yet were they not of trifling benefit to the State, or of trivial injury to the

enemy. And not the least in the scale of utility was her last essay, when the fiery brand of war had been quenched, in bearing away from the harrassed shores of Europe the arch disturber of his peace. We are rejoiced to find her name, honoured as it has been, still in the list; and it would be satisfactory, I am sure, to the service at large, if, in any new enterprise, those ships should be selected for its accomplishment, whose prototypes have conspicuously won renown in fight.

(To be continued.)

The Gogah Lascars of Kattywar.

The Gogah Lascars,* considered to be a mixed race of Arabs and Kellywaries, are the best native seamen of India, both as to their qualifications and to their capabilities of bearing fatigue. They are also more daring in their professional character, and in every way a braver and superior race to all other seamen of that country, they are also far more independent, and approach nearer to the character of the European seaman than any other, indeed the majority of them are far superior to the generality of those of the southern parts of Europe. They are faithful, and in many instances have shown their devotion to their employers. Many have highly distinguished themselves in the small armed vessels of the Government, Peerbhoy Sunjee may be cited as an instance.

An order by Government in 1810, will fully show the high estimation in which that distinguished native officer was held, but many other instances might be quoted. A few years back an attempt was made to induce them to enlist into the Indian navy, it being at that time the intention of Government to improve the qualities and situation of the natives in that service, but the intention failed through a misunderstanding, and not from any feeling of the people against the service.

The Lascars of Gogah claim origin from the Arabs of Lohea, in the Red Sea, and from people from the neighbourhood of Dieu. According to their traditions, the Arab portion of their forefathers came over from Arabia with the fleets belonging to, or allied with the Mogul conqueror of Guzerat, and that numbers of them remained in the country. Another tradition states, that during the wars with Europeans, about three hundred and fifty years back, having lost their ships, they settled in this country. If we refer to the early Indian history of the Portuguese, we shall find that an action was fought off Dieu about the year 1500, between the Portuguese fleet, and the combined fleets of the Zamorin of Calicut, the fleet of Guzerat, and that of Egypt. The latter was most probably Arabs from the Red Sea, and as this time agrees very well with one of their traditionary accounts, it is not at all improbable that this is the correct account, and that the Gogaree Lascars are the de-

* Gulf of Cambay, W. shore, 21°.7 N. 72°.3 E. nearly.

scendants of the seamen of the defeated fleet. As it is not likely they would remain in the neighbourhood of their conquerors, (the Portuguese,) they would move to a distance, and if this supposition is correct, it will reconcile both the former accounts of their being the descendants of Arabs, and people from the Neighead of Dieu. They have ever kept themselvss distinct from all other races of the seamen of this country, and until the last fifteen or twenty years have seldom settled away from their native place. One of the first great breaches of this rule, was the Government vessels (which in those days had their syrangs and most of their crews from this place,) being kept from 1810 to 1816 and 1817, round to the eastward. The Gogah Lascars who went round in them, in most cases remained in the vessels, many died, and others formed connections in Bengal and other places, and finding good employment, from their superiority as seamen, remained there, and never returned to Gogah. The Burmese war afterwards caused a severe loss by death, to many of them, and several shipwrecks within the last fifteen years, have contributed to their decrease. (The greatest number of seamen that Gogah ever possessed, was about sixty or seventy years back, when they amounted to between four and five thousand.) There are people still living who recollect their being between two and three thousand, ten years back. At the close of the Burmese war, they were reduced to about six hundred and fifty, but for the last five or six years they have again been on the increase as will be seen by the following statement, concerning them at the present time.

1st.—Old men principally employed in country vessels and Battillas	88
2nd.—Men advanced in age, but still sailing in merchant and and other ships	105
3rd.—Active men in the prime of life, from 17, to 35, or 38 years of age	416
4th.—Boys who have gone one or two voyages to sea, from 11 to 16 years of age	100
5th.—Boys between 3 and 10 years of age	200
6th.—Male children under three years	40
Total	949

The Lascars have above five hundred houses in Gogah, but many of these belong to and are inhabited by widows. The females amount to about eight hundred, and they have about three hundred children. The above statement of the houses and number of the people, is obtained from the Sirkars, besides the principal people. The number of Gogah Lascars that will be available for the shipping of the country during the next ten years, may be reckoned at about seven hundred.

These Lascars have another peculiarity, in which they widely differ from all other Lascars of the country. They are very careful, remitting most of their pay to their families; they never live in the houses of the Banian crimps in Bombay; they seldom or never get in debt, and never allow the syrangs or their agents to curtail any portion of their pay on

settling day. This is one of the causes why so small a portion of the crews of vessels are composed of them, as most of the syrangs from the circumstance of being obliged to give higher wages than are allowed to get a crew, are obliged to borrow from the Banians, who take their bonds with an exorbitant interest and premium. If they have a long and fortunate voyage they may manage to get clear; if not, they are fixed as the Banian's slaves, who makes them take what men he pleases, and also on his own terms. The way in which their large pay is made up is this:—the syrang sells clothes, dates, and other things, to the Lascars, at a price from one to four hundred per cent. beyond the prime cost; then the people keep no accounts, and it is common for a Lascar, after having been for fifteen months at sea, at the nominal pay of ten or eleven rupees per month, on his arrival to find that he has five rupees to receive. The Gogah people never allow any of these practices, they never take clothes or anything else from the syrang, and receive their pay to the last farthing. This is another cause against a fair proportion of them forming the crew of a ship. From all these causes the Gogah Lascars look down almost with contempt on all others, whom they consider as a far inferior race to themselves.

They pay an annual visit to Gogah, and their families, if they are able; but never neglect to send their earnings. They have a great objection to remove their families from Gogah, and few people that I have met in this part of the world, appear to be so devotedly attached to their native place.

The following is from the Camivisdar's register or Sirkar's chopra.

Males, including boys and children	943.
Females, including girls and children	1,100.
Houses belonging to Lascars and families	521.

Birkenhead Docks and Liverpool Interests.

In arguing this case before a Committee at the House of Lords, Counsel laboured very hard to convince their noble auditors that men of the law knew literally nothing apart from their own profession; and were it not a well authenticated fact, that it is creditable to such gentlemen to elicit error rather than truth, (if it will serve their clients' cause,) any plain common sense man would have stared at the ignorance they professed to display, on so simple a problem as the scouring power of sluice streams. As to the law of fluids—they listened to a professor of mathematics most impatiently, through a tedious dissertation on the difference between velocity and momentum, and appeared to be very little edified after all the pains he had taken. Well! lawyers we will suppose are too often confined to technicalities at the expense of general intelligence; but, as seamen, let us examine the question at issue, through the medium of common sense.

The principal objection started by the Liverpool interest against the deepening out Wallasey Pool, and constructing docks and basins therein, with sluice-gates on a new and approved principle, to keep all

clear, and assist the ebb tide of the Mersey in scouring its channels, was stated to be,—

"That this said pool or estuary would then have more capacious jaws than at present, and would swallow in (abstract—was the technical term,) such a prodigious quantity of the water from the river tide of flood, as to neutralize its influence on the ebb, and thus encourage the silting up of the channels of the Mersey, at its mouth; the said channels being at a distance of thirteen miles from the proposed basin or reservoir at Wallasey Pool."

Oh! said Mr. Rendel; The very reverse of this is intended. We are as anxious to preserve the channels which are the high road to our proposed docks as you are to yours, and we intend to let out this reserve of scouring power two or three hours before low water, which will increase the velocity of the stream of ebb in those very channels.

This would have been clear to common capacities, and, perhaps, it was equally so to the philosophers; however, they immediately shifted their ground, and asked, how such an effect *was possible,* seeing that any floating body would not travel half that distance down the river during the last two hours ebb?—Not willing to admit the solution, that it was not the indentical atoms thus let out of the basin which would reach the sea channels, but the raising the level of the retiring tide, and giving increased momentum to its receding waters by sending out in their rear an additional column or volume of the fluid plane to propel them onwards, with increased velocity of current towards the open sea. But, said they, if you take a large body of water into Wallasey Pool, you *abstract* that which would go higher up the river, and on the returning tide come down more naturally without your assistance.

Now, with all deference to learned men, I consider this a false hypothesis arising out of the common blunder, which regards the tides of flood and ebb, as of equal quantities or capacity; and not distinguishing between the tidal wave of the great ocean, and the transition wave of rivers and estuaries, for it is clear that any body of water abstracted from the tidal wave of ocean flood, is drawing from an *inexhaustible source,* and in lieu of lessening the supply which is rushing up a river, will increase it, because you take it from the foot of an inclined fluid plane the moment it begins to flow, or move, and consequently increase the momentum, at its summit, where it is swelling onward to find, and fill up all its levels; and if you add basin to basin, and estuary to estuary they would be equally filled from this gigantic source till the period of high tide arrived, the level of which could not be influenced in the slightest degree by such a comparatively insignificant reduction of its volume in any locality. Not so the tide of ebb. That, in all rivers has a limit in its capacity proportioned to the area and depth of the river itself. It has no ocean volume to draw upon, and, therefore, the more its creeks, and havens, and basins are deepened, the greater power either naturally or artificially is obtained for all scouring or sluicing purposes; if naturally it is a benefit, if artificially the beneficial effect is increased, because it may be held up till the vertical fall of tide in the channels below is considerable, and then the velocity of the streams will be in exact proportion to the dip of the

plane over which they have to run. It is the inverse proposition to this which originates the ruin and decay of havens and estuaries.

The old and new London bridges were then cited as arguments to prove, that narrowing the river Mersey, at Wallasey would prevent the water flowing up into the estuary above. But this was a lame conclusion, inasmuch as the proposed embankment at Wallasey would only straighten the stream from point to point, and thus enclosing in a spacious reservoir, if necessary, an existing eddy and counter currents which now have an undoubted tendency to retard the fair stream of tide. Evidence was also given on practical experience that benefit would be conferred on the other or Liverpool side of the Mersey, by the better direction of the stream and the reducing certain shoals, and giving an increased depth of water to the entrance of the docks.

And again, a bridge is a very different affair to the proposed embankment at Wallasey, which will run longitudinally in a direction with the river's course. A bridge forms a dam immediately across the current, impeding the waters more or less, as its piers and starlings are greater or less in their solid contents, and thus old London bridge had a considerable fall above its arches upon the flood tide, while upon the ebb a large body of water was literally dammed up to the great prejudice of the navigation.

The new bridge has given freer ingress and increased the vertical rise above its line more than two feet, consequently there is all that body of water to be returned upon the ebb, a manifest advantage in degree.

And from whence is that increased volume of fluid power derived, but from the tidal wave of ocean on the flood? and can any one suppose there is less water at the Nore or at Sheerness than before? Not an atom! The level is the same, and would continue to be so at high water, if ten thousand times that body had been let up into the interior, with this difference, and this only, that the momentum in the lower channels of the river would be increased. But to lessen or exhaust the supply from such a source is a fallacy unworthy the conclusions of theory, and disproved by facts.

Many instances might be cited; let us take one. Before the French revolutionary war, a large estuary existed in the interior locality, which received the transitive wave of ocean flood after it had entered Ostend harbour, and so extensive was this gorge, and the momentum occasioned by it at the said entrance from the sea, so rapid that a vessel approaching it in a calm, would be drawn into it by the velocity of the tidal stream. On the returning ebb such was the power of the receding waters to scour and keep open the channels of the port for ships of large tonnage, that Ostend in those days had an East India trade. Napoleon, foreseeing the improbability of eventually retaining the harbour of Ostend for France, and knowing the advantages it might offer to his enemies, and its proximity to the frontier, determined to destroy its maritime importance, and like a skilful engineer he immediately drained the aforesaid estuary, and to prevent its being restored, caused it to be covered with farms. He shut out an immense body of water on the flood, the velocity of ingress ceased, the sand accumulated at the mouth of the port, the interior silted up, and in fifteen years barges grounded at high tide, where East Indiamen had laid afloat

at low water. But *the level of high water at Ostend piers continued the same.*

Leopold is actively engaged in endeavouring to restore this once valuable port, and he is partially successful. He is forming basins and reservoirs, with sluices to assist the velocity of the ebbing tide; he is deepening the canal, and every available creek or pool to call in auxiliary aid from that illimitable source the tidal wave of ocean. He is in fact doing that to restore Ostend harbour which the Liverpool people assume will be the ruin of theirs, and it is painful to see highly talented men, siding with so imbecile an argument. They seem to have lost sight of the broad distinction between the motive power or supply of the sea, and of river waters, and reason mathematically of equal quantities where it is in the power of Science to command an indefinite increase on the one hand, and to control most completely, and direct its reaction on the other.

Why I would ask have all our noble havens and estuaries silted up? Because in lieu of preserving their depths and boundaries, in lieu of maintaining their tributary pools, and forming them into docks or basins to assist in sluicing and scouring the channels, they have been gradually converted into pasture lands. Their conservators have winked at the exclusion of the tidal stream.

Why are the Cinque ports lost to the country? Because their Corporations have been land owners, and every thievish year, gaining upon the havens, added to their acres, and now forsooth their descendants enriched by the plunder of their ancestors call upon the Government to construct new harbours, in exchange for these, which a grasping cupidity has suffered to go to decay. There are the once famed Cinque ports, an example to urge the merchants of Liverpool to abandon the false position which a mistaken policy has placed them in, to encourage their neighbours at Birkenhead to deepen Wallasey pool, to excavate docks, construct sluice-ways, take in the eddies and form reservoirs of scouring medium to improve and increase the back waters of the Mersey, and thus by powerful means, and united efforts, to make both sides of that river analagous to London and Southwark. Away with the idle fears which have prompted this ceaseless and worse than useless opposition between Cheshire and Lancashire. The trade of both would increase by generous emulation and honourable competion. Let them look to Ireland! That she can remain as she is, is a physical impossibility! That stream of trade and intercourse must increase! Let them look at the position of the Mersey, as a key to America, and all the colonies of the West, and it is full of promise. Is it not worth while to render both sides of this river and its wealthy industrious locality more available for the facilities of trade.

If the Liverpool people persist in opposing every improvement, which has a tendency to reduce portage dues, to lessen the enormous expense of warehousing and bonding cargoes, they may be assured other places and interests will not remain inactive out of compliment to their restrictive policy. Let them examine the announcement of their neighbours at Fleetwood,—inviting commercial intercourse by a promised saving of 200 per cent on ship and cargo.

Such are features of this mistaken policy, which has brought them

before Committees of both Houses of the Legislature, to reason philosophically on the law of fluids, and tidal waves, in lieu of the more solid arguments of pounds, shillings, and pence. There would have been the plain truth to decide upon. Not the fear of any injury to sea channels by leading their waters into tidal basins, but the much easier problem of the diverting a flood of bales and cases from the warehouses of Liverpool, into more convenient and less expensive stores at Birkenhead. But as surely as fluids will maintain their level, so will the wealth of the Mersey, or any other navigable river desert its shores and be directed into other channels, if its advantages and disadvantages are not equalized in accordance with the spirit of the times; and that spirit is one of energetic speculation and enterprise, which in the present day pervades the whole community, and bids defiance to interested opponents.

Ramsgate, July 1844. K. B. M.

On the Appearance of the Moon.

[Some remarks on the Telescopic appearance of the Moon, accompanying a Model and a Drawing of a Portion of her Surface; have been communicated to the Royal Astronomical Society, by J. Nasmyth, Esq., of which the following is the substance.]

The model and drawing submitted to the Society by the Author, represent a portion of the moon's surface of 190 by 160 miles, situated in the upper part of her left limb as seen in an inverting telescope, having in the centre the large crater marked in the Berlin chart No. 29, and named "Maurolicus."

The scale of the drawing is one-eight of an inch to a mile. The telescopes employed were two Newtonian reflectors, one of $8\frac{3}{4}$ inches aperture, and 9 feet focal length, and the other of 12 inches aperture, and 13 feet focal length, the powers employed being 240 and 360. The author has, for the last four years, confined his attention almost exclusively to the nature and structure of the lunar disc, and he selected the portion above mentioned as a subject for a model by reason of its comprising in a small space most of the chief features which so remarkably distinguish her surface.

The model was constructed with a view of illustrating the close relationship which appears to exist between the structure of the lunar surface and that of a considerable portion of the earth, in regard to the similarity in the results of vast volcanic action.

The author, in reference to the nature of the peculiarities of the surface of the moon, first remarks on the *vast size* of the lunar craters as compared with those on the surface of the earth. Of these there exist some of the enormous magnitude of 150 miles in diameter, besides other circular formations, such as the "Mare Serenitatis" and "Mare Crisium," which are from 200 to 300 miles in diameter, and which evidently owe their form to volcanic action of prodigious central energy.

This enormous effect, compared with that of volcanic agency on the earth's surface, will appear less surprising when we consider that the mass of the moon is scarcely the $\frac{1}{70}$th part of that of the earth, and that, consequently, the weight of the materials acted on by the volcanic force is diminished very considerably compared with bodies on the earth's surface: the probable want of atmospheric resistance will also assist in accounting for the immensely greater effects produced. The beautiful and almost perfectly circular form of the majority of the lunar craters may be due to the absence of wind or other disturbing causes, permitting the discharged materials to perform the course due to the impulse comparatively free from all impediment.

There are several portions of the moon's surface which indicate that considerable *time* has elapsed between the formation of one crater and that of another, this being proved by the fact of the circular mound of the one overlaying that of the other.

Next to the circular form of the craters, Mr. Nasmyth considers that there is no feature more striking than the small cones or mounds which we observe in the centre of most of the craters. These he considers to be the result of the last expiring efforts of the volcanic action, as we find it to be the case in Vesuvius and other terrestial volcanoes. Other cases exist in which there is no such central cone; but these may have resulted from the more sudden termination of the volcanic action which had permitted the fluid sooner to float across the bottom of the crater, and to form that plain, smooth surface which may be seen in a few cases. One has been, however, observed by the author in the upper part of the right limb of the moon, in which the lava had apparently kept flowing up so gently to the last as to leave the crater brim-full. The ruts or channels which may be distinctly observed in the sides or banks of the outside circular mounds, and which frequently extend to a considerable distance, prove that the matter discharged has not been entirely of a solid nature. Blocks of solid materials also appear to have been discharged with vast force and in vast quantity. They may, in many cases, be observed lying about the bases of the larger craters, where the surface is rendered quite rough by the quantity of such detached fragments.

The last peculiarity adverted to by Mr. Nasmyth consists in the bright lines which generally converge to a centre, and in which we frequently find a crater of very considerable magnitude. "Tycho," "Copernicus," and "Kepler," are remarkable examples of this appearance. The material of these bright lines is evidently of a much more reflective nature than the contiguous or general surface of the moon, and, in most cases, the interior of the crater to which they converge is equally resplendent. Mr. Nasmyth considers them to be derived from the same original cause which produced the central volcano from which they appear to diverge. It appears to him that they are produced by the flow of the molten lava through the vast cracks resulting from the great primary upheaving action which had burst upwards the solid surface of the moon, cracking it as a pane of glass does when broken by any pointed object. The centre of disruption has evidently been under the great central volcano. The cracks have diverged on all sides from this centre of action; and the molten lava immediately flowing up

would come forth in greatest quantity from the centre, and there result in and produce the great crater, while the radiating cracks would yield smaller portions *simultaneously* all along their course, however extended.

DESCRIPTION OF AN ARTIFICIAL HORIZON TO BE USED AT SEA WHEN THE NATURAL HORIZON IS OBSCURED, *and also of a method of adjusting Sextants, and other Astronomical Instruments without the assistance of distant objects.—By Captain F. W. Beechey, R.N., F.R.S.*, 1844.

IT has long been a desideratum with seamen to possess an instrument which would measure an altitude at sea, without the use of the natural horizon. Several inventions for this purpose have appeared from time to time, but as all these contrivances have depended either upon a spirit level or the action of a pendulum, and *the simultaneous coincidence of it and two other* objects, the difficulty of bringing the *three* together, exactly, when there was any motion of the vessel, was so great that very few persons could arrive at a degree of accuracy sufficiently near for practical purposes.

Indeed this difficulty of *making the horizon*, as it is called, before you can *make the observation*, has been the great objection to these instruments.* But besides this practical difficulty, the correct position of the instrument, being dependant upon the relative position of the eye, and of the *objects* to be received in contact, any alteration of either must occasion an alteration of the zero point, and consequently, an error is liable to take place every time the horizon or telescope is detached and replaced. †

The instruments which I am about to describe are free from these liabilities, and possess some decided advantages in other respects. They are constructed upon an entirely new principle, depending upon the simultaneous motion of a ray of light from the object glass of an achromatic telescope, and of the arm of a finally balanced beam, the axis of which is in the plane of the object glass, and the vane or wire at the extremity of the arm in the focus of the lens. Thus the wire (or artificial horizon) and the object when brought together by the index glass of a sextant remain in contact throughout the whole range of the field, notwithstanding that the motion of the hand should not counteract the

* This difficulty has been well described in the last number of the *Nautical Magazine*, p. 353, it is said "when it is considered how much the correctness of the observation depends on the experience and tact of the observer, when he has nothing to do but observe the contact of the sun's limb, how much more must it depend on that tact and experience to get a good observation on an horizon which the observer has to perfect before he can obtain a contact upon it."

† The amount of this error of the Zero point, arising from repeatedly detaching and replacing the horizon, will be seen in pages 351 and 358 of the June number, where it amounts, in the former to 46 seconds, and in the latter to 31 seconds, being the extremes of two series of observations! No bad illustration this, of the error to which one of these inventions is liable, among "all the contrivances" for a Marine Artificial Horizon.—ED. N.M.

motion of the vessel. In these instruments also a deviation of the plane of the sextant from the perpendicular does not affect the altitude, provided the telescope be directed to a spot *directly under* the object. But in order to guide the observer in keeping to a point immediately under the object observed, a cylinder of glass is placed beyond the horizon glass, and so adjusted that it will cast a bright ray from the object parallel with the plane of the sextant, and as there is a small pendulum in the telescope, it is only necessary to bring these two together, or parallel to each other, to ensure the vertical position of the instrument, and the proper direction of the telescope: an arrangement which greatly facilitates the observation, and contributes to accuracy. Another advantage is, that the position of the axis of the telescope does not affect the observation provided the vane works freely, and consequently no error ensues from the removal and fixing of the instrument to the sextant, to which all other methods are liable.

The whole apparatus is contained in the telescope of the sextant, and is readily adapted to any instrument,* and a lamp is attached to the instrument, which renders the night observation as convenient and correct as the day.

Another instrument for the same purpose and upon the same principle is constructed with spirits instead of a balance. It was at first intended only as a means of verification of the balance horizon in case of a suspected injury from violence, but I have added an eye piece to it that it might serve either purpose in case of necessity, and it possesses the advantage of having its horizon parallel with the natural horizon, both in a direct and transverse direction, so that the customary libratory motion of the sextant may be practised to ensure the proper altitude of the object.

Uses to which these artificial horizons may be applied.

The uses to which these and instruments for similar purposes may be applied has been so fully described in the *Nautical Magazine* as scarcely to need any further mention, suffice it to say, that they are intended for the observation of altitudes of any objects at sea, when the natural horizon is obscured, or hid by intervening land. To the observations of altitudes on shore also, when the sun or stars are either too high or too low for reflection; or when a mercurial horizon is not at hand; or the traveller finds it too cumbrous to carry one, and in short for the determination of altitudes of any objects, whether celestial or terrestial, at all times when the natural or mercurial horizons are not available; but I do not wish it to be thought that they will ever be more than a good substitute for that instrument. The telescope may also be applied to levelling purposes; the mean of the fore and back observations being taken without regard to the index error of the instrument.†

* Mr. Dennis (optician) of 118, Bishopsgate street, is the only manufacturer of these instruments.

† Aeronauts, should they ever put in execution their visionary project of crossing the Atlantic, would find these instruments afford them the only means they would have of determining their position. One of the first questions put bythe Hydrographer to a celebrated Aeronaut who proposed to cross in a balloon to America, was, "How he would determine his place when out of sight of land?"

These instruments will be adjusted by the maker, but as it is always easier to determine an error than to remove it entirely, the maker has been desired to mark the index error on the telescope + or — as the case may be. It is not probable that this error will alter unless the instrument be subjected to violence; at the same time it is proper that it should be tested from time to time.

There are various ways of determining the errors of these instruments, of which the simplest, and most obvious, is that of measuring the dip of the sea on some clear day, by bringing it up to the upper surface of the wire, or of observing simultaneous altitudes with the artificial horizon on shore. If the natural horizon be used it will be necessary to take the dip corresponding to the known height of the eye from the arc measured, and to apply the remained with a + or — correction as the case may be, without regard to the index error of the sextant. It is presumed that the glasses of the sextant are always in adjustment in these as in all other observations.

On the manner of using and determining the index errors of the Artificial Horizon.

As the tube containing the balance is larger than the ordinary telescope of a sextant, the collar is enlarged so that the tube may be slipped into it, and when wanted for ordinary observations, a spare thread which fits the screw on the telescope is slipped into the collar, to supply the place of it.

In making the observations, at all times, it is essential that the telescope be directed to a spot *immediately under* the object observed, which will be the case when the vertical ray cast from the glass cylinder, corresponds with the small pendulum in the telescope; and it is advisable always to have the frame of the sextant vertical, although the instrument is so constructed, that there will be little or no error if it be not exactly so, provided the last mentioned precaution be attended to: indeed it is a good guide to librate the instrument from right to left, and if the object does not run along the vane, to point the telescope more to the right or left until it does. It is always advisable to observe as near as may be in the centre of the field.

Owing to the necessarily delicate suspension of these instruments in order to obtain the requisite degree of accuracy, beginners find a difficulty in using them, from the oscillatory motion of the vane, but this will be in a great measure obviated, by resting the frame of the sextant, or the arm, on the gun-wale, or some other firm place; and whenever the vane oscillates much, by depressing the telescope, until it is checked against the top of the tube, and then gently releasing it by raising the telescope again; tapping the frame of the sextant lightly with the finger, in case the vane should hang: indeed as the vane has been made to go rather stiff, in order to reduce the oscillations, it will greatly contribute to accuracy, if the instrument be *repeatedly tapped lightly*, during the observation: and this may be readily done, by seizing the tangent screw with the fore finger and thumb, resting the third finger on the arc, and tapping with the middle finger.

Should any comparison be made between the apparent motion of the

vane of this instrument, and that of others previously in use, it is to be observed that in these, the motion of the vane describes a corresponding angle at the eye to the arc *actually passed over*, whereas in other instruments the arc *apparently* described by the vane, is received at a distance of *five or six times its radii*, so that the eye detects only about *one sixth of its real motion*, and consequently it appears more steady than it really is.

At night it will be necessary to illumine the telescope in order to see the vane distinctly, for which purpose a lamp is made to fix on beyond the horizon glass.

When the sun is very faint, put up one of the coloured screens at the back of the horizon glass.

The spirit horizon is used in the same manner as the balance, except that the surface of the spirit being always *parallel with the natural horizon*, the object ought *not* to run along the vane, but touch in one part only, as in the ordinary observation with the sea horizon. The *upper surface* of the dark line across the field of the telescope is to be used as the horizon.

The length to which this paper has extended, unfortunately prevents any examples being given, of the degree of accuracy that may be expected from these instruments, but it will be satisfactory to know that in many sets of observations which have been taken by various observers in smooth water, the *extremes* of ten observations varies between 2′ 40″ and 3′ 20″, which practice will no doubt still further diminish.

I now proceed, Sir, to describe a method of adjusting sextants without the necessity of resorting to distant objects, and cannot but think it strange that so simple and obvious a method has remained so long in obscurity, considering the great inconvenience, opticians especially, are put to occasionally for an object to adjust their instruments by.

It is well known that the rays which diverge from the focus of an achromatic object glass of a telescope emerge in parallel pencils, consequently a ray reflected by the index glass of a sextant to the same ray seen direct through the telescope ought to form no angle, but be identical with it, and if it be not, the instrument is out of adjustment. If, therefore, we place a Diaphragm with cross wires in the focus of an object glass of *sufficient diameter* to admit of the same ray being taken up at the same time by the index glass and telescope of a sextant, it will afford a ready means of performing all the adjustments dependant on the parallelism of the glasses.

Should the instrument be out of adjustment the horizon glass may be set upright by the *vertical wires* seen direct, and by reflection being made to coincide; and brought parallel to the index glass in the other direction by the *horizontal* wires being made to coincide. If the wires cannot be distinctly seen the circular aperture of the Diaphragm may be used and the sextant adjusted by it precisely in the same manner as by the disc of the sun. The wires of the Diaphragm may also be used for correcting the line of collimation of transits, theodolities, &c., care being taken that the tube does not alter its position during the observations. *

* To correct the line of collimation, correct one-half by the collimating telescope, and the other by the collimation screw of the transit.

Thus every instrument maker has within his own reach, and at little or no expense, a ready means of performing all those adjustments which depend on distant objects.

In adapting telescopes to this purpose care must be taken that the Diaphragm be in the focus of the object glass precisely.*

Description of a Self-Registering Pendulum for Indicating the Inclination of Ships under Sail, etc.—*By A. G. Eyde, Lieut. R.N.*

Devonport Dockyard, July 6th, 1844.

Sir.—The very rudely constructed instruments placed on board ships to ascertain the degrees of inclination under canvas, or from lurching in a sea-way, caused me to give my attention to the subject, as far back as the year 1836, and I had an instrument constructed, on improved principles, with self-registering hands so that the maximum inclination could at any time be known. This in a dark night with heavy squalls where the attention of the officer of the watch is required to shorten sail, could not be obtained; but the self-registering pendulum may be referred to after all is made snug aloft, and the maximum degree of inclination may be obtained.

Several of these instruments have been made from time to time, and supplied to Her Majesty's ships, on the application of their Captains for them; the general reports of their usefulness have been acknowledged.

I beg herewith to enclose copies of two reports in their favour. Subsequently to this I have made still further improvements by adding a Register to mark the number of oscillations a ship would make in a sea-way; taking a starboard and port lurch to constitute a roll.

The advantages which suggest themselves in making these additions to the Pendulum are as follows:—

An accurate account of the stability of a ship, connected with the number of rolls made in a given space of time.

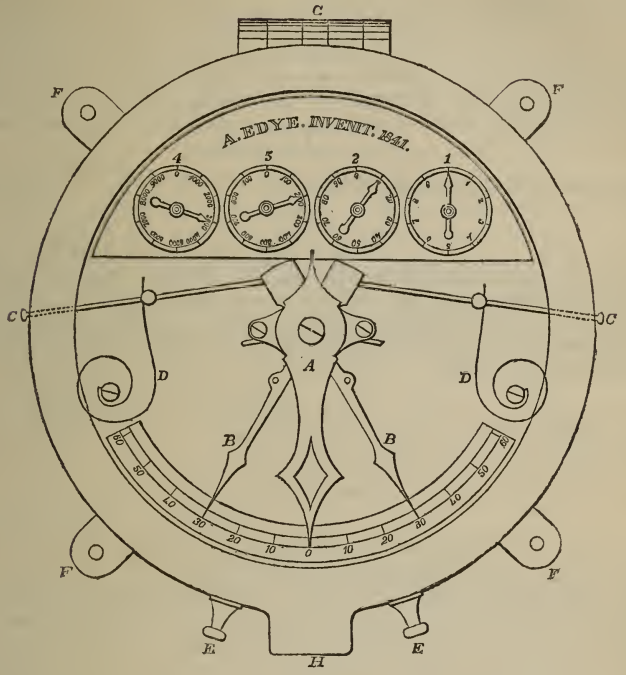
I apprehend if these instruments were supplied to an experimental squadron of ships, their relative qualities could be much better obtained; at present we say one ship rolls more quickly than another, but our comparisons may, in many cases, prove erroneous; but with the self-registering pendulum these requisites are actually pointed out and relieve us at once of all doubts.

I would therefore submit that columns should be introduced in a ship's log book for registering the inclination and number of rolls made in every hour, or at any other convenient interval.

The accompanying sketch of the dial of the proposed pendulum will give some idea of it, but to draw plans and elevations of the machinery, at the back, sufficient to elucidate its construction would be occupying

* At night a piece of silver paper placed over the end of the tube containing the Diaphragm and a light placed beyond will render the disc quite ditinct.

too much of your space; on which I fear I have already drawn rather largely.



A The oscillating hand.
BB Self-registering hands, moved by a pin at the back of A.
CC Spring rods for re-setting self-registering hand at Zero.
DD Springs attached to rods CC.
EE Short bolts for securing the balance at the back, when the instrument is to be removed, or not required for use.
FFFF Lugs for securing the pendulum to the wheel stanchion, or any other convenient place amidships.
1, 2, 3, 4, Dials decimally divided, on which the number of rolls are registered. No. 1, having made one revolution, No. 2 marks one division; and so on with Nos. 3 and 4.
The figures represented by the dials are as follows:—beginning with No. 1, 10, 100, 1,000, and 10,000.
In reading off therefore, if the number of rolls exceed 1,000, we shall commence with No. 4, for example: 3210, No. 4, will shew on its dial 3000, No. 3, 200, No. 2, 10, and No. 1 at Zero.
The whole is protected by a glass cover, G being the hinge, and H the lock.

Should you consider the foregoing description likely to prove interesting to any of your numerous readers, you will oblige me by giving insertion to it in one of your future numbers.

Believe me, yours &c.,

A. G. Edye.

To the Editor, &c. *Lieutenant* R.N.

Opinions of the above Instrument.

H.M.S. Inconstant, Spithead, Nov. 25th, 1836.

SIR.—A Pendulum invented by Mr. A. G. Edye, Mate of His Majesty's ship *Britannia,* having been fitted on board the *Inconstant* for trial, I think it due to Mr. Edye to take the earliest opportunity of reporting upon its merits, and I have great pleasure, therefore, in stating, for the information of the Lords Commissioners of the Admiralty, that in our recent cruise during a month, with the Experimental Squadron, I had constant opportunities of judging of this Pendulum, and that I have found it superior to any other I have ever seen before.

I have, &c.,

JOHN HAYES,

Adml. Sir P. C. H. Durham, G.C.B., &c. *Captain.*

H.M.S. Pique, Portsmouth, June 25th, 1837.

SIR.—I beg to recommend for general use, a Pendulum to indicate the ship's inclination under canvas, (the invention of Mr. Edye, Mate R.N.,) which has been supplied to Her Majesty's ship *Pique.* It is very efficient for the purpose required, owing to its simplicity and correctness; and I have great pleasure in bringing it to your notice.

I have, &c.,

(Signed) H. J. ROUS,

Rear-Adml. Sir T. L. Maitland, K.C.B., &c. *Captain.*

MASSACRE AT NEW ZEALAND.

SIR.—Having just received the *New Zealand Chronicle,* of the 6th of January, containing a detailed account of the deplorable massacre at Wairaw, on the southern shore of Cook's Strait, (in which Capt. Wakefield, R.N., and other gentlemen of the town of Nelson, were murdered by the chiefs Rauparara and Ranghiaita,) and proceedings connected therewith, I have extracted, and transmit to you, that portion of the paper which may be termed the "summing up," as giving, in a condensed form, the substance of the unfortunate affair.

"Of the Waikato natives," Dr. Dieffenbach says, "the latter have expelled almost all the inhabitants from the finest district in Cook's Straits, Taranaki, without occupying it themselves. It was not the desire of more dwelling places which tempted them to this warfare, as they themselves possess one of the most productive parts of the island."

And this brings us to the Wairaw. Rauparara, (who styles himself King of New Zealand,) whose life has been one long murder, massacred all the original inhabitants, the Rangitani, twelve years ago, leaving but a small remnant, which escaped to the woods, where they have lived since. Still the whole district is, except by these, uninhabited. He and his tribe live across the sea at a distance. One of the scattered tribe is, while we write, in Nelson, and describes the horrible barbarities accompanying this slaughter. For the Maories are more atrocious in their cruelty towards each other, than even they have been towards the whites. This is his right to the Wairaw; but this right he parted with, and sold the land he so savagely won to the Company's Agent.

"Tuesday, October 22, 1839.—Hiko, Rauparara, Rangaihiro, and all the chiefs of the Kafia tribes, exceptRanghiaita, who resides at Mana, were on board early. A third talk on the important matter took place, in the presence of at least thirty witnesses, and ended in the full cession to me for the Company of all their rights and claims in both islands. The decks were thronged with their followers." (Ward's Sup. In.)

"Oct. 24th.—Hiko, and Rauparara on board. * * They then begged to have the deed of conveyance read to them. This was done in the presence of Captain Lewis, and all our party, and translated to their perfect understanding. The map of the territory to be ceded was again shown to them. They pointed out to what places they had claim, and told me that no one lived in most parts of it, and that a great deal of it was of no use to any one, and least of all to them. They then executed the deed this morning, (ibid.) The thing was done as at Port Nicholson, with all solemnity and publicity. Presuming then, that this, to them useless tract was fairly bought, the Company's agent at Nelson concluded he had a right at least to survey it, though the chiefs last mentioned had been at Nelson, and threatened to take the lives of those who went there."

We stop here to ask one question on this confession. Would it not have been more wise to have delayed the survey, until the matter was clearly settled to the satisfaction of the natives, than run the hazard of collision with them, by putting their threats at defiance? We think the result proves that it would.

"The settlers, too, wanted their lands, and a large staff of surveyors, paid by the year, was maintained at a great expense, nor could be kept idle. But if his right had been less certain, these chiefs had bound themselves, by signing the treaty of Waitangi, to leave the vindication of their claims to the British Government. And having agreed with Mr. Spain, to meet him there in the end of June, they went in the end of May, and, with arms and threats of violence, expelled the surveyors, and burnt a house. The outrage could not be overlooked. The Police Magistrates and others went armed to arrest them—the conflict began—the whites fled—the gentlemen surrendered, the Maories shook hands with them, and after some time deliberately massacred them."

The colonizing of the New Zealand Islands, is a delicate subject to touch upon; but from all that appears, the British Government has been forced into it to avoid two greater evils:—1st, to neutralize the bad effect that would have arisen from their partial occupation by a profligate class of men, who, by their recklessness, would, assuredly, have counteracted any beneficial amelioration of the condition of the natives, through the influence of the missionaries.

2nd.—From policy. It will be, at least, gratifying to those who are averse to such occupation, to know that every thing has been done to ensure an equitable arrangement, (though slow hitherto in its progress,) for the benefit of the indigenous possessors of the soil. Unpleasant circumstances have, however, arisen out of this arrangement, which require to be speedily remedied. Except at Auckland, in the northern island, the colonists are without any protection from the ferocity, cunning, and artifice of the chiefs and their followers: and are even restrained from embodying a militia for their own security.

The following gentlemen were massacred at Wairaw, in Cook's Strait: Mr. Thompson, P.M., and County Judge, Captain A. Wakefield, R.N., Magistrate, Capt. Ingland, J.P., Mr. Richardson, Crown Prosecutor, Mr. Patchett, Land agent, Mr. Howard, R.N., Com. storekeeper, Mr. Cotterell, Surveyor, and 15 men killed, 27 escaped. Total, 49. There were about 100 natives, about 50 of the men armed with muskets, &c.

X.

THE MERCHANT SERVICE.—*Substance of the Bill for the regulation of the Merchant Service,*

(*From the Shipping Gazette.*)

WE have received this morning a copy of the Bill to be laid before the Parliament for the amendment and consolidation of the laws relating to Merchant Seamen, and for keeping a register of Seamen. The bill is of great length, and contains sixty-four clauses, which provide as follows:—

The first clause sets forth the preamble. The second clause provides that in vessels above the burthen of eighty tons no Seaman be taken without a written agreement; and that no seaman be shipped who is not a registered Seaman, duly provided with a registry ticket, which is to be retained by the Shipmaster until the Seaman be discharged. This measure was proposed several years ago by a contributor to this Journal. Clauses 3, 4, and 5, relate to the form of agreements. Clause 6 authorises the sending of Seamen to goal for refusing to join a ship as agreed, and for refusing to proceed to sea. Clauses 7 and 8 provide fines for temporary absence, or refusal to perform duty; six day's pay is to be forfeited by the offender for every twenty-four hours of such absence; and in like proportion for any less period of time, with the expenses incurred by the hire of a substitute.

Clause 10 proposes penalty for harbouring deserters; and suggests that no debt above five shillings shall be recoverable from a Seaman till his voyage is ended, and that Seamen's effects shall not be detained under pretence of debt. Clauses 11, 12, 13, 14, 15, 16, 17, and 18 relate to wages; summary mode of recovering them; the Seaman's discharge; the return of the crew of a ship sold abroad; and to the supply of medical stores, &c. Clauses 19 to 30 provide for the establishment of a register record office of Seamen; the procuration of register tickets; the return of such tickets in case of the death of the parties to whom they relate, and penalties *in quantum sufficit* against Shipmasters who shall not conform to the proposed regulation.

Clauses 31 to 44 compose the law touching apprentices, their indentures, treatment, assignment, exemption from service in the Navy, &c. Clauses 45 to 47 enact that no Seaman shall be discharged abroad, nor be abandoned without sanction of Consul, &c. Clause 48 determines that Seamen, when allowed to be left behind, shall be paid their wages.

Clauses 49, 50, and 51 relate to the entry of Seamen from merchant vessels on board Her Majesty's ships, and give power to Her Majesty to sue for sums advanced for the relief of Seamen left abroad. Clause 52 provides that ships' agreements, on their arrival at foreign ports, shall be deposited with the British Consul, and at a colony with the officers of Customs. Clause 53 prohibits the shipment of seamen at a foreign port without sanction of the Consul or Vice-Consul, such sanction to be endorsed or certified on the agreement. The penalty is 20*l.* for every Seaman shipped in non-conformity with this clause. Clause 54 empowers the officers of-men-of-war to demand of Shipmasters the production of the log-book, the muster-roll, the register-tickets of Seamen, the indentures of apprentices, and the list of passengers embarked; and to muster the crew, in order to be satisfied that the law has been duly observed. Clause 55 authorises Consuls, the Registrar, and the Officers of Customs, to require the production of the agreement and muster-book.

Clause 56 gives power to any Consul or Vice-Consul of Her Majesty, and to any Collector or Comptroller of Customs, to survey, or cause to be surveyed, the provisions, water, and medicines shipped on board any ship for the consumption of the crew; and "if on such survey it shall be found that such provisions, water, or medicines are of bad quality, or unfit for use, or not appropriate, or there shall not appear to be a sufficient quantity thereof, the surveying officer shall signify the same in writing to the Master of the ship: and if such Master shall not thereupon provide other fit and proper provisions, water, or medicines, in lieu of any which may be signified by the said surveying officer to be of a bad quality, or unfit for use, or not appropriate, or if any such Master shall not thereupon procure the requisite quantity of provisions, water or medicines, or shall use any provisions, water, or medicines which shall have been signified by the surveying officer to be of a bad quality, or unfit for use, or not appropriate, he shall in each and every of such cases be guilty of a misdemeanour."

Clause 57 proposes—"That all offences against the property or person of any subject of Her Majesty, or of any foreigner, which shall be committed at any port or place, either ashore or afloat, out of the dominions of Her Majesty, by the Master and crew (including apprentices), or any or either of them, belonging to any ship, subject to any of the provisions of this Act, or who within *three months* before the committal of the offence shall have been the Master thereof, or formed part of any such crew, shall be declared to be offences of the same nature respectively, and to be liable to the same punishments respectively, as if they had been committed on the high seas, and other places within the jurisdiction of the Admiralty of England, and shall be enquired of, and adjudged in the same manner as if such offences had been committed within such jurisdiction; and when any trial for such offences shall take place before any justices or judges, it shall be lawful for the court to order the payment of the costs of the prosecution, as in the case of costs of prosecutions for offences committed within the jurisdiction of the Admiralty of England."

Clause 58 proposes that whenever any complaint shall be made to any of Her Majesty's Consuls or Vice-Consuls of any offence committed at sea by the master and crew (including apprentices), of any ship subject to any of the provisions of this act, it shall be lawful for any such Consul or Vice-Consul to enquire into the case, upon oath, and at his discretion to cause any offender to be placed under all necessary restraint, so far as it may be in his power, that he may be conveyed in safe custody to England as soon as practicable, in any vessel of Her Majesty, or of any of her subjects, to be there proceeded against, according to law; and the costs and charges of imprisoning any such offender, and of conveying him and the witnesses to England, if not conveyed in the ship to which they respectively belong, shall be considered and deemed as part of the costs of the prosecution, or be paid as costs incurred on account of seafaring subjects of the United Kingdom left in distress in foreign parts; and all depositions taken before any Consul or Vice-Consul abroad, and certified under his official seal to be the depositions, and that they were taken in the presence of the party accused, shall be admitted in evidence in all courts having criminal jurisdiction, and otherwise in like manner as depositions taken before any Justice of the Peace in England now are, or may be; and the register ticket of every offender shall be delivered up to Her Majesty's Consul or Vice-Consul, as the case may be, and be transmitted by him to the Registrar of Seamen."

Clause 59 declares that the Master or other person having the charge of any ship belonging to any subject of Her Majesty bound for England, shall receive and afford a passage and subsistence during the voyage to any such offender or offenders, not exceeding the rate of one offender for every 100 tons of his ship's burthen; and on his ship's arrival in England, the Master of any such vessel shall take the offender or offenders before a Justice of the Peace, who shall deal with the matter as in cases of offences committed upon the high seas; and in case the Master or other person having the charge of any ship belonging to any

subject of Her Majesty, when required by the Consul or Vice-Consul to afford a passage to any offender, shall not afford such passage, or shall not take the offender or offenders before a Justice of the Peace as aforesaid, every such Master shall be liable to a penalty of 50*l.*; and the Seaman, if acquitted, shall receive his register ticket again upon due application to the Registrar of Seamen."

Clause 60 extends the above provision to Colonial vessels, when navigated to ports in the United Kingdom or the Channel Islands. Clauses 61 to 64 relate to the recovery of penalties, application of forfeitures, &c., &c.

The Inclined Angle in Surveying,

Devonport Dock Yard, July 5th, 1844.

Sir.—In the *Nautical Magazine* for this month, I have read a letter from Captain Beechey claiming an invention of mine for reducing the Inclined Angle, to the Horizontal Angle as published in the June number.

Having myself received a communication from Capt. Beechey to a similar effect, I trust you will, in justice to me, insert my letter which was written to him in support of my claim.

I am, &c.

A. G. Edye.

To the Editor, &c.

H.M. Dockyard Devonport, June 10th, 1844.

Sir.—Your note of the 6th of June, from Woolwich, which I did not receive until Saturday, P.M. claiming the invention of a diagram for the reduction of the inclined angle proposed by myself to you, a very considerable time since, but which had been constructed some months previous to my making any mention of it, excepting to some of my messmates in the gun-room, has been a source of regret to me; I trust, however, Sir, that a few words of explanation may convince you (connected with some extracts of conversation which passed between us) that my claim is substantial.

In the first place you say, "Mr. Bailey, at your suggestion, constructed the diagram for you in your cabin, and that you brought a rough one to me in the Chart room, and explained it to me, whilst I was scheming with circles cut out in board, in imitation of a spherical figure you had shewn me in your cabin," when in fact you first set me to work on the question."

I beg Sir, most respectfully to assure you that Mr. Bailey did not construct your diagram, until after you had examined my spherical figure for some considerable time in the Chart room, and I remember well expressing my regret in the gun-room, that I had said one word about my plan, and came to the resolution, never, at any future time, to give a hint of any idea which might suggest itself to me; and stated that I felt myself much hurt "that you had constructed a diagram similar to mine, after obtaining my suggestions:" this conversation must be in the memory of some of my late shipmates.

Secondly.—I did sincerely declare I never would look at your diagram, and begged you, when you said you had improved on my plan, not to enter into any explanation of your views, stating that the idea had originated with myself, and that I did not wish to receive any hints (I never constructed any diagram after this conversation I am sure.) Mr. Bailey can bear testimony to the former part of this assertion. I may perhaps state further that Mr. Bailey told you I had improved on my diagram, and you asked him if he had told me anything about it, (it would seem by this that you must have had some previous conversation with him), Mr Bailey stated that "He had not". I think Sir, this is another testimony that my claim to originality of idea, is well-founded. Further, I once

stated to you, that if we had a speedy method for reducing the sun's inclined angle, we could with the assistance of your Table of Azimuths which you had constructed for the parallels of lat. in which we were working, get the true bearing of an object in a very short space of time, your answer was, "You had better set to work." In concluding, I would state that when I called on you in town, I told you that I had made a diagram of 18 inches radius, and that it was my intention to shew it to Capt. Beaufort. Your answer was, "I do not think the plan of any practical use." I said "Perhaps so, but there is the idea." Your reply was, "You had better show it to Capt. Beaufort." This conversation of only a few weeks past, must have shewn you that I claimed the invention, (such as it is,) and if you had then expressed the same terms contained in your note of the 6th June, 1844, I certainly should not as an act of courtesy only, (however mortified I might have felt,) have requested the insertion of my diagram, in the *Nautical Magazine*.

I am, &c.,

A. G. Edye.

To Captain Beechey, R.N. *Lieut. R. N.*

A Relic of Nelson.

The following correspondence has taken place respecting the bullet by which our great naval hero was mortally wounded at Trafalgar:—

London, June 10th, 1844.

My Lord.—In taking the liberty to approach you in this way, I hope for pardon in the motive, and I confidently but humbly anticipate that the subject of my address will claim for itself the kind consideration and favour of your lordship.

My Lord, as the senior surviving brother of the late Sir William Beatty, M.D., R.N., who had the much envied honour of being the principal medical attendant of the gallant Admiral Lord Viscount Nelson on board the Victory, whilst in quest of the enemy's combined fleet, and in the glorious battle off Cape Trafalgar, it has, of right, fallen to me to be the possessor of the fatal ball which killed that noble and ever-to-be-lamented hero; and my lord, if I value the possession of of this treasure in a high degree, well knowing that a relic so unique, so interesting and highly prized as it has been, and will continue to be, so long as the name of Nelson shall be cherished in the hearts of his countrymen, I feel in an equal degree the responsibility which attaches to me as the humble possessor of it.

Actuated by this feeling, and an anxious desire to be released in a creditable manner from so precious a trust, I have conferred with my brother, Colonel Beatty, Commandant of the Plymouth division of Royal Marines, who is alike interested in its safety, and the result is, my lord, that we quite agree in thinking that the ball, which may justly claim to be considered a very interesting national relic, should be submitted to her Majesty the Queen.

With this impression, and presuming that the proper mode of doing it would be peculiarly in the province of your lordship, I have humbly to request that your lordship will do us the honour, at a fitting opportunity, of presenting it to her Majesty, in the humble hope that her Majesty will be graciously pleased to accept the same from two old soldiers, who have long and zealously served their country and have individually shared in its military triumphs. I have the honour to be my lord, your lordship's most obedient and humble servant,

Vincent Beatty,

Ci-devant Captain of the late 24th Light Dragoons.

To the Right Hon. the Earl of Haddington,
First Lord of the Admiralty.

(Memorandum for his Lordship.)

The ball, with the particles of the coat and epaulette that were forced into the body by the stroke, is neatly and elegantly set within a crystal case, which is appropriately mounted with a double cable of gold round its circumference, and opens like a watch.

The following letter was received by Capt. Beatty, in reply to the foregoing.

In reference to Captain Beatty's letter to the Earl of Haddington, of the 10th inst., Lord Haddington would beg Captain Beatty to have the kindness to call on him at the Admiralty as soon as it might be convenient to him to do so.
Admiralty, June 12, 1844.

The following morning Captain Beatty waited upon Lord Haddington with the ball, when his Lordship was pleased to hand to him a letter from Buckingham Palace, of which the following is a copy :—

"*Buckingham Palace, June* 12, 1844.
My dear Hamilton.—I return you Captain Beatty's letter; will you tell Lord Haddington, that her Majesty will much like to possess the very great curiosity which Captain Beatty and his brother are good enough to offer. Windsor Castle would certainly be the proper place for its deposit.

Yours very sincerely,
Geo. Anson

Extraordinary Piracy and Murder.—The "Saladin."

The following details show that an act of piracy and murder, perhaps unexampled in atrocity, has been committed, by which the lives of no less than eight individuals have been sacrificed. The *Saladin*, was a Newcastle ship, and belonged to Messrs. Johnson and Cargill, of that port. She sailed from Valparaiso 17th Feb., having a rich cargo on board, consisting of 70 tons of copper, 14 bars of silver, (each weighing 150 lbs.,) about 9000 dollars in specie, and a large quantity of guano. She was a remarkably fine ship of 550 tons burden, and commanded by Captain M'Kenzie, with a crew of about 14 hands. The first suspicions, which ultimately led to the discovery of the dreadful tragedy detailed below, were aroused on the 20th of May, when the *Saladin* ran on shore on the back of an island in Country Harbour, near Halifax. On being boarded, with a view to render them assistance, the crew reported that the Captain had died at sea on the 5th of the same month, the Mate three days subsequently, and that two of the crew had fallen into the sea. They said that they had latterly been sailing they knew not whither, and were astonished to find they had reached Nova Scotia. Captain Cunningham was the first person who went on board. He found the whole ship in disorder. The crew were all well dressed, and appeared to have been faring sumptuously for several days. Bottles were lying about in every direction. A chest of dollars was open, and the ships papers and all sorts of valuables were scattered about. Various articles of female wearing apparel, as also that of a little child, were found, but the crew made no mention of such individuals having been on board, and the entries in the log-book ceased altogether on the 14th of April. The circumstances excited the suspicions of Capt. Cunningham, who immediately forwarded information to the Hon. Michael Tobin, (Lloyd's agent at Halifax,) and that gentleman proceeded without loss of time to the spot in H.M.S. schooner *Fair Rosamond*. The result of his examination led him to the same conclusion Capt. Cunningham had previously arrived at—namely, that the crew had mutinied and seized the vessel. Application was accordingly made to the Court of

Admiralty on the subject, and by their authority the crew were arrested on suspicion, and placed in solitary confinement in the Halifax county gaol. In the course of a very few days two of the prisoners, named Carr and Galloway, who held the respective offices of cook and steward of the ship, evinced a desire to make a confession of the circumstances, and the following documents which have been received at Lloyds, detail fully all the facts connected with this horrible affair :—

Extract of a letter to William Dobson, Esq., Secretary to Lloyd's.

Halifax, Nova Scotia, June 10, 1844.

The men were arrested on suspicion, and placed in solitary confinement. After the lapse of two or three days, the writer received a letter, of which we inclose a copy. He immediately repaired to the gaol, where he heard the most appalling disclosures it has ever been our lot to listen to. When it was known that two had confessed their crimes a disposition was evinced by the others to relieve their consciences of the weight which oppressed them, and from them we received a full corroboration of their statement. We send a verbatim copy of Jones's confession, which details minutely the terrible atrocities which where enacted on board the *Saladin*. The captain (Fielding), who appears to have been the instigator of the mutiny, had been master of the ship *Vitula*, of Liverpool, which ship had been seized by the Chilian Government while engaged in some nefarious voyage.

Lloyd's Agent.

Copy of a note referred to in the the above letter.

Her Majesty's Gaol, Halifax, June 8, 1844.

Dear Sir.—William Carr and John Galloway want to make a confession to you concerning the *Saladin*, and what happened to the Officers and part of the crew ; therefore we would be glad to know how soon you could get an opportunity to hear it, for we know not the moment we are launched into eternity, and we can never expect to find happiness in another world.

We are, Sir, &c.,

William Carr.
John Galloway.

Confession of George Jones.—I, George Jones, first joiner of the *Saladin*, at Valparaiso, crew 12 in number, and two others (Capt. Fielding and his son George), was working my passage as sail-maker, but acted as steward, by Captain M'Kenzie's request, until after passing Cape Horn, when John Galloway took this situation, and I repaired some of the sails. While in the cabin as steward, frequent differences occurred between Captain M'Kenzie and Captain Fielding ; the latter in consequence would often refuse to come to the table at meals ; and I have heard Captain M'Kenzie say to the mate on these occasions that it served him right for giving Fielding a passage free. When Captain M'Kenzie came on deck Fielding several times cursed him, and used abusive language. Used then to come to me and tell me what he had said about his quarrels with Captain M'Kenzie, and then talk of the amount of money on board, and what a fine prize a pirate would make of them. Asked me if I would fight against them if attacked. He would not. Captain M'Kenzie used to drink a good deal. Fielding on one occasion said to me—"Now Jones, if you want to save your own life now is the time.—I have spoken to the carpenter and I intend to be master of the ship." At another time, Fielding, in my presence, made a motion to show how he would cut Captain M'Kenzie's throat, saying at the same time " Damn you." This was when Capt. M'Kenzie was on the ladder going from the cabin to the deck, and had his back to him (Fielding). When I attempted to acquaint Captain M'Kenzie of it he stopped me, saying, " You damned Irishman, I want to hear nothing." While I acted as steward I scarcely ever had a civil word from him. He was contin-

ually cursing and swearing at me. One afternoon Captain Fielding said to me, "You did not come on deck, as I requested last night; you had best do it. You will lose your own life if you don't. The other watch will do it, and you will be killed." I understood that he meant by this that we were to take possession of the vessel. I soon after mentioned this to Hazelton, in the galley, by Fielding's directions. Hazelton laughed, and said, with an oath, there could not be a better chance; there was a great deal of money on board. Hazelton, went out. W. Johnston then came in, and I said to him, "There is a curious work going on; that Fielding is a queer man. He wants to make a haul—Hazelton will probably let you know about it." Before night it was known to Hazelton, Johnston, and myself. They both told me Fielding had spoken to them about it, and that all was right. A day or two passed over, and on Friday we were bending sails. The Dutchman was getting them out, and I said to him, "There is going to be curious work on board." He then asked what was that, and I said that Fielding, Jack, and them were going to take the ship and kill Sandy (meaning Capt. M'Kenzie, thus named by the men). Anderson replied to this immediately, "By God! I'll take a knife and cut his throat (meaning Capt. M'Kenzie); he shall no more strike me away from the helm." I then mentioned to Hazelton what Anderson had said, and he replied that he would get him all right—that he would talk to him. He did so when in the foretop, and Anderson willingly consented, and expressed more satisfaction than any one on board. He talked and laughed about it.

Capt. Fielding then came to me, and said the vessel must be taken that night (Friday). I did not go on deck that night (being sailmaker I had no regular watch to keep), but all the persons engaged in the plot expected me, and afterwards asked me why I did not come. These were Fielding, Johnston, Hazelton and Anderson. I excused myself to Fielding by saying I did not think he expected me, to which he replied, "It is of no use making a fool of yourself; if you go back, your life is no more." Next day (Saturday) Capt. M'Kenzie and Fielding had a serious quarrel on the poop, which was heard by all the men on deck, about the ship's gig. After this Fielding said "This night it must be done; they were all ready, and, if I did not come up, my life would be no more." I went to bed in the forecastle; Johnston, Hazelton, and Anderson were in the same watch under the Mate, and the deed was to be done in their watch that night. I went on deck between 12 and 4, while they were on the watch. I was then told it was arranged that Fielding should keep up a conversation with the Mate, during which Johnston should strike him with an axe. The Mate was lying on the hencoop. Fielding came forward and said to us, Johnston, Anderson, and myself, "Now is the time; the Mate is asleep." He said it was best to send for Jack to see what he said about it, that there might be no mistake. Johnston accordingly relieved Hazelton. The latter agreed to proceed, and returned to the helm. It was then proposed I should take the helm and Johnston kill the Mate, and that Fielding, Hazelton, and Anderson, should go down and attack the Captain in the cabin. I accordingly went to the helm. I saw Johnston then strike the Mate with an axe. I think Anderson also struck him. Fielding, Johnston, and Anderson threw the body overboard. Some sime was then spent consulting what to do, and I afterwards learnt they were in doubt how next to proceed. Anderson and Hazelton went into the cabin to attack the Captain, but returned, fearing, as they said, the dog would bite them. It was then agreed to make an alarm, and strike the Captain as he came up from the cabin.

Nothing more was done for a quarter of an hour, when the Captain rang his bell three or four times, but no answer was given to it. I was much agitated whilst at the helm; it was several times taken from me by Fielding and Hazelton, in consequence of getting the ship in the wind. Fielding and the others went to the main deck, and I heard nothing for some time until I heard the carpenter's voice in the water. This alarmed me, as I understood the Captain was to be killed before the carpenter was disturbed, and I exclaimed, "Oh, Lord!

there is a man overboard." With this Fielding ran immediately on the poop, and shouted, "A man overboard" as loud as he could, the Swede following him. The Captain (M'Kenzie) ran out of the companion, and as he came up Anderson struck him. The blow did not kill him. He ran after Anderson round the companion. Fielding then called to me, "Damn you, why don't you run after him; if you don't lay hold of him I will give you a clout that will kill you." I let go the helm and went round the companion, and the Swede and Capt. M'Kenzie were struggling together. Fielding again said: "Damn you, why don't you lay hold of him?" I then took hold of his hands, and Fielding struck him two blows with the axe which killed him. While in the act of striking, M'Kenzie exclaimed. "Oh, Captain Fielding! oh, Captain Fielding, don't!" Fielding said "Oh, damn you, I will give it to you!" Fielding hauled him forward in front of the companion, and struck him again, and then threw him overboard. Then Fielding, Hazelton, Anderson, and Johnston, went down to take some liquor, and said, "The vessel is now our own." I was relieved from the helm, and went below to get a drink. I came on deck, and Fielding addressed his son, saying, "I am Captain." The son said, "It was a pity that I had not a blow at Sandy." They all assembled on the quarter-deck. and consulted how they were to dispose of the rest of the crew, who were forward. Fielding proposed calling the watch. They all agreed that Hazelton and Johnston were to go forward and call the watch—that I should lie down in the long boat—that Anderson was to stand by the mainmast, pretending to be asleep—Fielding in the companion. When the man came to relieve the helm they agreed to take his life. During this time Collins came on deck and went on the head.

When the watch was called Jem came up. He went to relieve the helm. Anderson struck him, as I understood, with a hammer, and he was thrown overboard. I heard no noise in the boat. The other two men, Moffat and Collins who had gone down again, were then called up. They came up and Moffat sat down on the spar, fore part of the galley. Hazelton struck him, as I understood, with an axe, and killed him. I heard the blow, and after I came out of the boat I saw the body. I assisted Anderson and Johnston in throwing the body overboard. Before Moffat was thrown overboard Anderson went forward, struck Collins on the head and he fell into the water. I did not see the blow, but I heard Collins's exclamation on receiving it. Some time after this it was proposed by Fielding to do away with the cook, Carr, and the steward, Galloway, but the rest would not consent. Fielding then said he would let them work, and he would find a way to get rid of them. The cook came aft about 6 o'clock. Was alarmed when Captain Fielding told him the ship was ours; that all the crew remaining were on the poop. The cook asked what it meant, he was told, and appeared quite satisfied. Galloway came aft laughing, and when he was informed of what had occurred did not appear alarmed, and said it was a pity he did not know about it, as he would have liked to have had a cut at Sandy, (meaning Captain M'Kenzie) Some time after on the same day (Sunday) we all swore on a Bible to be loyal and brotherly to each other.

The day after a carving-knife, which had been in the cabin, was missed, which gave us all some uneasiness. A pair of pistols were discovered under a table by Johnston, and when he was going on deck he beckoned to me not to go up. I however, went up. Fielding was then on deck, and wanted a screen put down the skylight in the after cabin. He said he wished it to air the cabin. Hazelton and Johnston came afterwards on deck, and the latter told the former about the pistols under the table, which caused us all alarm, as we had thrown, as we thought, all the fire-arms overboard, excepting a musket in the after-cabin which Fielding wished to keep to shoot fowl. We went below and asked Fielding what he knew about the pistols; he said he knew nothing. After a search we found a large copper vessel with powder, and threw it and the pistols overboard, with which Fielding expressed himself satisfied. Anderson informed us

then that Fielding purposed to do away with the cook, Galloway, Johnston, and myself. When we heard this, we accused Fielding, who denied it. After this we discovered a bottle of poison in a locker, of which Fielding had kept the key, and the carving knife, which had been missing. The cook then said he would not rest until Fielding was thrown overboard. Fielding was then secured by Johnston, his hands and feet being tied; he was kept thus for some time, asking us to heave him overboard, screaming and shouting so, that Johnston gagged him by our request. He was laid upon deck by Hazelton and Johnston, and was laid down close to the quarter. After breakfast, while we were all sitting on the hen-coop, the cook and Galloway requested that he might be thrown overboard. We then agreed he should go, and the cook and Galloway went immediately forward, without saying to us what they purposed doing. The first we heard were the screams of the boy, as they were putting him overboard. While clinging to Galloway, the boy, (Fielding's son George) tore some of Galloway's clothes. We then agreed that Galloway should take charge of the ship as navigator, he being the best scholar. It was proposed to go to the Cape Breton or Newfoundland, to scuttle the vessel, and take the long-boat up the Gulf of St. Lawrence. The money was divided amongst us all.

On the night before the mate was killed when I came on deck, I was going aft with Captain Fielding and Anderson. We stopped about the mainmast, and I turned back being frightened, and there seemed a sort of panic, from which I thought they might give up the plan altogether. Fielding then came after me, and asked "What is the matter?" My answer was not satisfactory: he then said, "Damn you, if you don't go back, and not make a fool of yourself, I will kill you right out." Fielding had a carpenter's adze in his hand at the time. I was quite alarmed at the threat and returned with him.

Halifax Gaol, June 8th, 1844. GEO. JONES.

The confession voluntarily made in the presence of Hon. Mich. Tobin; Hon. J. W. Johnston, Attorney-General; J. J. Sawyer, Esq. High Sheriff.

From the foregoing confession it may be inferred that it was the object of the wretch Fielding, to murder the whole of the ship's company, with the object of possessing himself of the entire treasure on board, although it is true that in so doing, he would have left but himself and youthful son on board.

Additional Particulars.—Some of the crew of the *Saladin* having deserted at Valparaiso, others were shipped to supply their places, and among these was a man named George Jones, a sail-maker, and a Captain Fielding, who had been the master of the ship *Vitula*, of Liverpool, which had been some time previously seized by the Chilian Government, and confiscated for an infringement of the revenue laws of that country. Fielding had a son also on board, a youth about 16 years of age. The *Saladin* sailed on the 17th of February, having a crew in all of 14 persons. A good deal of bad feeling existed between the different members of the crew, and on some occasions Captain M'Kenzie openly quarrelled with Fielding, who had obtained his passage through the instrumentality of the mate, Mr. Byerley. No open rupture however, took place, before the middle of April, about which time a plot to murder the captain, mate, and a portion of the crew, was concocted by Fielding and Jones, who engaged in their nefarious design the assistance of a Swede and two others of the crew, who had been shipped at Valparaiso. Carr and Galloway state that the whole plot was planned and executed in less than 48 hours. The mutiny broke forth on Sunday morning, April 14, during the larboard (Mate's) watch, the Mate himself being the first victim. He was in a delicate state of health, and while reclining on the poop, he was struck with an axe and knocked overboard, without the least noise being made. The Captain's watch was then called, and as the men came on deck they were knocked on the head and pitched overboard, almost without a groan. Two of the murderers then went below to dispatch the Captain, but his faithful dog was beside him on the berth, and they were afraid to approach

him, lest he might be aroused by its barking. Another man, who came upon deck about this time, and who was in the mizen chains, had his head split open with an axe, and he fell into the sea, his blood streaming on the deck. The wretches at this juncture, in order to draw the Captain out of his cabin, raised the cry of "A man overboard." The plan succeeded but too well, and as he ascended the companion ladder, he received a blow on the head with a hammer from one of the mutineers. The blow did not, however, take good effect, and he rushed upon the deck with the hope of defending himself, but was attacked by others, soon overpowered and thrown overboard. Carr and Gallaway state that they first heard an alarm at this period, having been exempt from keeping watch. Carr went on deck, and, upon enquiring what was the matter, was informed of all that had occurred, and then saw before him those who remained of the crew except Galloway, who was still below. The attack appeared to have been most systematic. Six men were lost without a struggle, and almost without leaving a trace of murder behind.

Fielding, who seems to have been a most desperate villain, soon after the murders became suspicious and fearful. He threw overboard all the arms and ammunition in the ship, except a brace of pistols which he secreted under the cabin table, and a large carving-knife in the possession of his son. Galloway states that he made a proposal to him to murder all the crew, except two besides themselves, run the ship ashore, sink her, and then make their escape. Galloway would not consent to this hellish project, and told the crew of the proposal. They immediately became aroused at Fielding's treachery, and resolved to pitch both him and his son overboard in self-defence.

Fielding and his son were accordingly bound hand and foot, and left in the Captain's cabin during the whole of one night. On the following morning they were both thrown overboard, the former by Carr, who alleged that he was forced to act against his inclination, and the latter by Galloway, also against his will.

The ship was now placed under the commrnd of Galloway, who was the best scholar and navigator on board. His intention was to have gone up the St. Lawrence, where the crew were to have scuttled the vessel and escaped with the specie and bullion. They were, however, led astray by the commander of an American schooner, which they spoke only a few days previous to the time when the vessel struck, and this, providentially, has been the cause of the murderers being brought to justice.

Carr, the cook, is a native of Newcastle-upon-Tyne, and a middle-aged man. Galloway, the steward, is a native of Scotland, and not more than 19 years of age. Both of them were shipped at Newcastle, and had accompanied the Saladin throughout her voyage.

The *Halifax Herald* of June 12 says :—" We understand, from good authority, that all the prisoners will plead guilty. The Judge of the Admiralty has been sent for, and the trial is expected to take place in about 10 days."

The mate of the Leo, lately arrived at this port, with a cargo of guano, mentions some desperate adventures of Captain Fielding, who figures in the case of mutiny and murder on the high seas, and whom the mate had met with at Copiapo. Fielding, it seems had adventured upon taking a cargo of guano from the Peruvian coast, without the knowledge of the authorities; or at least without discharging the dues claimed by them in such instances; and had his ship confiscated, and sold in consequence, and himself thrown into prison. Having escaped from prison he associated himself with a number of Spaniards, and made an attempt to recapture the vessel, in which, however, he was again defeated, taken prisoner along with his son, and sentenced to ten years' imprisonment. He afterwards made his escape, and was once on board the Leo, now lying in our harbour, and lunched with the master then in command, (not the present commander,) before joining M'Kenzie. It may be deemed fortunate, therefore, for the master and crew of the Leo, that Fielding did not obtain a passage home in that vessel, which might, perhaps, have become the scene of his horrible crimes.

The Royal Yacht Clubs for 1844.

The readers of the *Nautical Magazine* must from time to time have perused in its pages miscellaneous information relative to our Yacht Clubs. We now propose, when we can command a little room, to pay increased attention to these excellent associations, which it is pleasing to find go on augmenting in number, strength, and influence. At the present moment we have a

Royal Eastern Yacht Club at . . .	*Leith*
" Northern Yacht Club in the . . .	*Clyde*
" Irish Yacht Club	*Dublin*
" Cork Yacht Club	*Cork*
" Western Yacht Club of Ireland, in the . .	*Shannon*
" Western Yacht Club of England, at . .	*Plymouth*
" Southern Yacht Club at . . .	*Southampton*
" Yacht Squadron	*Cowes*
A Yacht Club at	*Harwich*
Royal Thames Yacht Club . . .	*London*

And the Arundell, British, Victoria, and Wharncliffe Yacht Clubs and Sailing Societies, also in the Thames. The Yachts dispersed among these several Clubs exceed 400.

The Royal Yacht Squadron.—*The Annual Meeting.*

At this General Meeting, the Earl of Yarborough having explained the object of the meeting, Mr. J. Bates, the Secretary, read a report of the transactions of the squadron since the last annual assembly of its members, which was highly satisfactory; and also a financial statement of the receipts and expenditure of the club during the past year, from which it appeared that, after all disbursements had been made, a considerable balance remained in the hands of Messrs. Glyn, Halifax, Mills, and Co., the bankers and treasurers. The report having been confirmed, the arrangements of the ensuing Grand Regatta at Cowes were discussed, when it was determined that on Tuesday, August the 6th, a cup of the value of 50*l.* should be sailed for by yachts, the property of members of the Cowes Squadron; a prize of similar value, on Tuesday the 13th, (the anniversary of the birth of her Majesty the Queen Dowager): and on Saturday 17th, (the Duchess of Kent's birthday), her Majesty's cup, the value of 100 guineas. The distance in each match to be round the island. The following is the list of Club yachts, corrected to the 20th of July:—

Vessels.	Tons.	Owners.
Resolution	s. 164	Duke of Rutland
Sea Flower	c. 35	Marq. of Conyngham
Flower of Yarrow,	c. 183	Ditto
Pearl	c. 130	Marquess of Anglesey
Kestrel	y. 202	Earl of Yarborough
Jack o'Lantern	s. 140	Earl of Orkney
Xarifa	s. 185	Earl of Wilton
Intrepid	c. 55	Earl of Tyrconnel
Therese	c. 121	Earl of Desart
Petrel	c. 98	Earl of Ilchester
Antelope	c. 90	Visco'nt Powerscourt
Flower of Yarrow	s. 141	Viscount Exmouth
Merlin	s. 104	Viscount Milton
Admiralty yacht	c. —	1st Lord of the Admty
Arrow	c. 84	Lord Godolphin
Lufra	c. 81	Lord John Scott, M.P.
Romulus	c. 30	Lord Wharncliffe
Sapphire	c. 70	Ld. H. Cholmondeley
Amazon	c. 75	Sir J.B.Walsh bt.M.P.
Fanny	c. 91	Sir E. Scott, bt.
Flirt	s. 132	Sir B. Graham, bt.
Louisa	s. 123	Sir H. Parker, bt.
Mischief	s. 221	Sir J. H. Hawley, bt.
Galatea	s. 190	C. Talbot, Esq., M.P.
Hebe	c. 68	A. W. Corbet, Esq.
Tar	33	Rev. Denis. George
Emerald	c. 58	J. L. Symonds, Esq.
Reindeer	c. 107	J. Moore, Esq.
Georgian	s. 168	W. Lyon, Etq.
Claude	y. 30	T. Gibson, Esq. M.P.
Whim	c. 49	C. Brett, Esq.
Forest Fly	c. 36	W. Hornby, Esq.
Aurora	c. 40	W. Beach, Esq.
Ariel	s. 118	A. Hill, Esq.
Corsair	c. 84	J. Congreve, Esq.
Nancy	c. 59	J. Leche, Esq.
Dream	c. 100	G. Bentinck, Esq.
Rostellan	s. 70	T. G. French, Esq.
Water Lily	y. 31	J. Hibbert, Esq.
Cynthia	c. 40	R. Frankland, Esq.
Rowena	c. 33	G. Simpson, Esq.
Brilliant	s. 393	G. H. Ackers, Esq.
Talisman	c. 96	R.Meiklam, Esq.
Eudora	c. 59	R. W. Cooper, Esq.
Columbine	y. 90	J. Smith Barry, Esq.
Camilla	s. 147	T. Halifax, jun. Esq.

Nymph	c.	31	Sir J. Bayley, bt.	Falcon	c.	60	J. Beardmore, Esq.
Phantom	c.	56	Sir W. Curtis, bt.	Witch	c.	70	W. Oglander, Esq.
Syren	c.	45	Sir T.M. Wilson, bt.	Edith	c.	70	J. C. Ewart, Esq.
Trinity yacht			Sir J. H. Pelly, bt.	Osprey	c.	59	J. Petre, Esq.
Noran	c.	70	Sir H B. Hoghton bt.	Gem	s.	125	J. Hambrough, Esq.
Ann	c.	42	Hon. W. H. Hare,	Wanderer	s.	141	B. Boyd, Esq.
Charlotte	c.	77	Hon. W. H. Hedges,	Fairy	s.	143	W. Peareth, Esq.
Elizabeth	c.	65	Hon. A. Moreton,¶	Breeze	c.	55	T. Legh, Esq.
Stormfinch	c.	63	Lieut.-col. Bowers,	Ganymede	c.	70	P. Smyth Pigott, Esq.
Circassian	s.	160	Major C. Phillips,	Naiad	c.	70	J. Quantock, Esq.
Ariadne	c.	84	Capt. W. B. Ponsonby	Albatross	c.	75	J. C. Blackett, Esq.
Hawk	s.	33	Capt. G. Keane,	Turquoise	c.	77	C. H. Coote, Esq.
Will-o'-the-Wisp	c.	45	Capt. Williams, R.N.	Maid of the Mist	c.	30	H. Studdy, Esq.
Peri	s.	56	Capt. C. Bulkeley	Charm	c.	73	Sir W. P Gallwey, Bt.
Medina	c.	44	Capt. Holcombe RHA	Owen Glendwr	c.	123	N. Barwell, Esq.
Zephyretta	s.	180	H. Hope, Esq.	Esmeralda	s.	126	J. Delafield, Esq.
Sparrowhawk	c.	84	T. Hallifax, Esq.	Gitana	s.	168	H. Burr, Esq.
Alarm	c.	193	Joseph Weld, Esq.	Iris	c.	75	T. Fleming, Esq.
Siren	s.	161	J. Fleming, Esq.	Ariel	c.	71	J. D. M. Sterling.
Hussar	s.	120	T. Williams, Esq M.P.	Zoe	c.	35	H. Beaver, Esq.
Gazelle	c.	87	Ditto	Jannette	s.	186	Earl of Egremont

The following gentlemen among others were recently elected members:—

Henry Hope, Esq. Zephyretta schooner, 180 tons, proposed by the Earl of Yarborough, seconded by George Bentinck, Esq.; Major Courteney Philips, Circassian schooner, 160 tons, proposed by the Earl of Tyrconnel, seconded by Captain Charles Bulkeley; Sir Henry Bold Hoghton, Bart., Noran cutter 70 tons, proposed by the Earl of Wilton, seconded by Sir R. Bulkely, Bart.; Hugh Beaver, Esq., Zoe Cutter, 35 tons, proposed by T. P. Williams, Esq., M.P., seconded by Sir R. B. Bulkely, Bart.

Honorary Members.—Commander Robert Rowley, R.N. proposed by Earl of Yarborough, and seconded by E. N. Harvey, Esq.; Captain Henry Marshem, R.N., proposed by J. Moore, Esq., and seconded by Earl of Yarborough; Commander Henry Lacon, R.N. proposed by T. Hallifax, Esq., and seconded by Captain C. H. Williams, R.N.; Commander Charles Green, R.N., proposed by Captain A. L. Corry, R.N. and seconded by G. Bentinck, Esq.; Commander Henry Peake, R.N., proposed by W. Lyon. Esq., and seconded by Earl of Yarborough; Captain W. G. B. Estcourt, R.N., proposed by Earl of Yarborough, and seconded by Captain A. L. Corry, R.N.; Commander William Crispin, R.N., proposed by Earl of Yarborough, and seconded by N. Barwell, Esq.; Commander John J. Robinson, R.N., proposed by N. Barwell, Esq. and seconded by A. Hill, Esq.; Commander A. T. Goldie, R.N., proposed by Vice Admiral Sir G. C. Hammond, K.C.B., and seconded by A. Hill, Esq.; Captain the Hon. E. A. J. Harris, R.N. M.P. for Christchurch, proposed by Earl Yarborough, and seconded by Vice-Admiral Sir G. C. Hammond; Captain E. B. Tinling, R.N. proposed by Earl of Yarborough, and seconded by N. Barwell, Esq.; Commander Hall, R.N., of Her Majesty's ship *Victoria and Albert*, proposed by Earl Yarborough, and seconded by Spencer de Horsey, Esq.

The following shows that ten more yacths were added to the Cowes squadron, on the 12th of July:—

JULY 10.—At 7 A.M., the Kestrel yawl, Commodore Earl of Yarborough, came out of harbour; at 10 A.M., several yachts at the station saluted the Commodore, which was returned by his lordship.

At a general meeting of the club held at the Squadron house, Cowes, on Friday, July the 12th, Commodore the Earl of Yarborough in the chair, and a long list of the noblemen and gentlemen of the club also present, the following were elected as members, viz.:—Crotton Vandeleur, Esq., Caroline cutter, 60 tons; Benjamin Heywood Jones, Esq., Psyche, cutter, 60 tons; John Edward Lacon, Esq., Spider, cutter, 33 tons; Nathaniel Alexander, Esq., Curlew schooner, 46 tons; Albert John Hambrough, Esq, Medina cutter, 44 tons; Sir Robert Gore Booth, Bart., Adelaide, cutter, 125 tons; Clement Ruding, Esq., Eagle, yawl, 53 tons; the Marquis of Blandford, Wave, cutter, 54 tons; Lindesey Shedden, Esq., Dove, cutter 50 tons; Andrew Fontaine, Esq., Gauntlet, cutter, 60 tons. Honorary members.—Commander John Branford, R.N., Commander John Moore, R.N., and Captain H. Edwards, R.N.

Aquatic Events for August.

Aug. 1.—Doggett's coat and badge wager, from London bridge to Chelsea, by six young watermen.
1.—Warrington Regatta
1, 2, 3.—Clyde Regatta, at Largs, under the patronage of the R. N. Y. Club.
3.—The London Sculls challengers match, from Westminster to Putney.
5.—St. Margaret and St. John's Westminster Regatta
5.—Bungay Annual Regatta, on the Waveney.
6.—Northfleet, (near Gravesend) Regatta.
6.—Fleetwood Regatta on this and four following days.
6.—Royal Yacht Squadron match, by third-class cutters of 75 tons, and under 105, round the Isle of Wight, for a £50 cup. No time allowed for tonnage.
10. The London Sculls—Match between the present holder and the winner among the challengers, should there be any.
13.—Royal Yacht Squadron match, by large class schooners, round the Isle of Wight, for a £50 cup. No time allowed for tonnage.
14.—Devonport and Stonehouse Regatta.
15.—Oxford City Regatta.
15 and 16.—Royal Southern Yacht Club Regatta—at Southampton.
15 and 16.—Newcastle and Gateshead Regatta.
17.—Royal Yacht Squadron match, by fourth class cutters of 105 tons, and above, round the Isle of Wight (now called the Queen's Course), for her Majesty's Plate of 100 guineas.
19.—Lambeth annual Oars Match in the Thames.
19.—York second annual Regatta, on the Ouse.
19 and 20.—Manchester and Salford Regatta.
26.—Royal Western Yacht Club Regatta, at Plymouth.
27 and 28.—Lochyran Regatta.
— — —Arundel Club, sailing match in the Thames, for a cup, given by Mr. T. Hewes.

Voyage of H.M.S. Cornwallis.

Canto the Eighth.

Description of the Porcelain Tower—Ratification of the Treaty—Return of the Expedition from Nanking to Chusan.

This letter's a quiet one—war has its charms
For those whose profession it is to bear arms;
But after such times of exertion and riot,
'Tis delightful to rest for awhile, and be quiet.
The Treaty was sent to Pekin to be signed,
The Emperor having now made up his mind,
Set his seal with good grace, so that in a fortnight
Back it came again "ratified," which means "all right."
The Auckland with Malcolm immediately started
To get our Queen's signature; and he departed
With orders to go without stopping to Suez,
So if he's not a lucky chap, I don't know who is.
And now we amused ourselves walking about
All over the country—we went in and out

Of the villages, gardens, and fields, and the peasantry
Now divested of fear, gave us tea with much pleasantry.
The Admiral and Plenipo also went in
Now and then to the government house in Nankin;
And the governor gave a great feed to a party,
Who rode through the town, they made quite a hearty
Dinner—for dishes of all sorts were seen,
Birds-nests soup—samchoo, shark's fins, and tea black and green.
The sight which we all thought most worthy of note
Is the famed "Porcelain tower," to which I devote
A few lines.—With the base 'tis nine stories in height,
And I never beheld a more beautiful sight
Than the sun setting on it—'twas like burnished gold;
For the bricks glisten bright, though three hundred years old,
And their colours dark green, but each story is faced
With bricks of fine white, and real porcelain most chaste!
It has eight equal sides, four of which have a door
To a balcony leading—a railing before;
In each of the chambers of which there are nine,
Are hundreds of josses. In the ground floor a fine
Large one sits cross-legged on a stone table,
The small ones in rows placed wherever they're able;
All China is covered with little gilt josses,
Which answer the purpose of Catholic's crosses;
(Though I once knew a Puseyite parson who swore
They don't bow down *to* them, but only *before*.)
To each story a roof turned up at the edges,
With a bell at each corner—the whole of the ledges
And tiles on the roofs are bright yellow, which shine
In the sun,—the effect being gorgeous and fine.
On the top of the roof is a long iron spire
Surrounded with hoops—and mounting still higher,
Is a large golden ball in the shape of a pear,
With the narrow end up, pointing into the air.
The height from this ball to below in the street,
Is exactly two hundred and sixty-one feet.
From the top is obtained a most beautiful view
Of the mountains, the suburbs, the river, and through
The whole of the city. An abbot resides
In a house near the tower,—the old fellow prides
Himself on the neatness with which it is kept,
And made a complaint that some *sailors* had crept
Outside on the roof, and with true English taste
Had broken the bricks, and a whole side laid waste;
This might have been true, but we tried hard to see
Where the damage was done by these men's thoughtless spree.
I really believe that some English *barbarians*
Did take some bricks, but these were "Tractarians"
(As parsons are now called,) and soldiers to boot,
And doctors all ready as *sailors* to loot;
Some persons asserted, that taking the mean,
'Twas not soldier nor tar, but a jolly marine.
However though every one said "who'd have thought it,"
I've got a fine brick, from the abbot—I bought it.
On the east of the city, a wonderful thing,
Is the place where are buried the old race of Ming,
Who ruled over China before the Manchoos,
Took the land, which the Ming were thus destined to lose.
Close under a hill just outside of the town,
On a smooth turfy plain, like our English south-down,
Is a right-angled avenue,—figures of stone
About twelve feet in height—each one standing alone.
Four women, four warriors, four dogs, and four horses,
Four elephants, camels, wolves, lions, and josses,

Of each sort, two sitting, two standing upright,
Form, I safely may say, a most curious sight.
There is also a joss-house, with three frogs side by side,
At one end of this line, and a large one beside
With a slab on his back at the other end; which
By a wall is enclosed ten feet thick, with a niche
Or arch'd entrance, on each of the sides, (it is square,)
And the top of it open, exposed to the air.
I don't think in my former epistles I said
What terrible ravages sickness had made
In our force; since the town of Ching-Kiang had been taken,
Not a ship or a regiment but what was shaken
Most fearfully;—cholera also prevailed,
And the "ninety-eighth" many fine fellows bewailed.
In some of our ships every man was unwell,
And what was the cause of it, no one could tell.
Cornwallis whose crew of seven hundred consisted,
Had half of them sick, but still she persisted
In helping the rest, and I often have known
Her men furling ship's sails, which could not furl their own.
Our good doctor, King, really worked "like a horse,"
Or doubtless our loss would have been ten times worse.
As soon as the treaty was signed, all the force
Began to embark, and each transport, of course
Made the best of her way, when the troops were on board,
The rain at this time with great violence poured:
The river was also uncommonly high,
The banks were o'erflooded, the plains far and nigh
Were vast sheets of water,—in the river, the tide
Ran with violence quite to a torrent allied.
Six millions of dollars forthwith to be paid,
Was all that detained any ships, so we staid;
Before starting the Admiral wishing to see
All the men of war off, and well deep with sycee.
On the first of October from Nanking we started,
Our anchor so fast having stuck that we parted
The cable; and left sixty fathoms and more
With the anchor about eighty yards from the shore.
The Driver walked off with us, Ching-Kiang we passed
At a slapping pace,—but we dropped anchor at last
For the night—some thirty-six leagues having gone,
And started again before six the next morn,
Passed Kiang-Yin—the "Marion" was stuck on a rock
Near Ching-Kiang, and to day with a violent shock
On *we* went, but luckily only a shoal,
Or we might in our bottom have made a large hole.
We hove and we strained, and we worked might and main,
We got off in the night—and then got on again;
Next day we heeled over some twenty degrees,
Most unhappy we looked, as the ships with the breeze
Ran past us, as also Sir Hugh in the Marion;
But at noon we got off, though too tired to carry on
That night.—So we anchored and waited a day
To put things to rights—we then went on our way
Through the flats of Foushan, as we went through before,
Then ran past Hung-Ming, and grounded no more.
At Woosung on the "sixth," in the evening at five,
"Shaking hands with ourselves" to get so far alive.
Ships coming and going all next day (the seventh,)
The whole fleet had got down to Woosung on th' eleventh.
The Admiral and Plenipo, went to Shang-hai,
Their last visit was hostile—this time all was play,
The town densely peopled—trade going on bravely,
In the river some five hundred junks riding safely.

On the fifteenth, a number of ships with us sailing,
We got clear of Woosung—there was not much bewailing
As we left Yang tse-Kiang the next day—all was smiles
When we saw about sunset our friends "Rugged isles."
The seventeenth took us to "Just in the way",
It blew very hard with much swell the next day,
And the next—on the "twentieth" Driver at last
Took us into Chusan—on our passage we passed
The little Modeste, going home with her freight,
The Blonde will go soon, but a short time must wait.
The harbour is now full of ships of all sizes,
Men-of-war, transports, steamers, troop-ships, *but no prizes*..
For in our late war—but I cannot tell why,
Though we knocked down all *forts*, we let all *junks* go by.
Perhaps 'tis as well gold did not us allure,
We're supposed to fight better whenever we're poor.

H.M.S. Cornwallis, Chusan,
28th October, 1842.

Wrecks of British Shipping.

Continued from p. 413.—cs. crew saved; d. drowned.

VESSELS' NAMES.		BELONG TO	MASTERS,	FROM.	TO.	WRECKED.	WHEN.
Catherine	185	———	Roberts	London	Liverpool	run down	May 18,
Columbine		———	Townsend	Canton	Calcutta	Sanger S.	April 7.
Corsair		St. Johns N.	Lucas	Sydney	St. John	Langlois I.	May 20.
Intrepid		Liverpool	———	———	———	foundered	April 3.
James Harris		———	———	———	———	———	April 5. 1d
Jane Gifford	190	———	Paul	Madras	Colombo	Zangalle	Dec. 27.
Jane Walker		Liverpool	timber 1d.	———	———	———	April 13.
Keeling		Yarmouth	———	———	———	———	April
Lady Colebroke		———	Sharnald	Halifax	Quebec	Off Scaterie	June 9, cs
Lady Leitrim		———	Richards	Dublin	Antigua	Bird I. reef	May 27.
Levant Star	195	Exeter	Briknell	Newport	Rotterdam	abandoned	May 17.
Manchester S.		———	Dudley	Hull	Hamburgh	Elbe	June
Margaret		Porthcaw l	———	Porthcawl	Swansea	St. Brides' B	June 12, cs
Nautilus		———	Willens	St. Lucia	London	Anegada R.	April 14, c
Neptune		———	———	Dominica	London	at Sea	May 13, cs
Palestine	200	———	Mc Laren	Liverpool	Aden	burnt	
Phoenix		Scarborough	Turner	Mirmichi	England	Miqualon	Nov. 26, 8d
Reliance		———	———	———	———	Manilla	Feb. 25.
Sir G. Provost		———	Savage	Newry	Quebec	Off Galbarus	May 31: cs
Southampton		———	———	Porto Rico	———	at Sea	May 8.
Thisbe	205	———	Charters	London	Jamaica	Lafitte reef	March 25.

185—Run down by a ship unknown. Two of crew picked up and landed at Cowes by the Spanish brig Nuevo Ramoneite, M. Ferrerez, by whom great kindness was shown to them.

188—Two seamen on board the Philopontos arrived at Bombay from Liverpool.

189—Found abandoned by L'Encarnet, French brig, 46° N. 49° W. The crew saved from her boat, excepting the carpenter, and on 9th put on board an English brig bound to Quebec.

191—Found abandoned by the Perseverant of Granville to St. Pierre in 45° N., 46° W.

192—Wreck boarded in lat. 39° long. 47° by Historian.

199—The French brig La Claire arrived at Gibraltar June 14th, with the Master and crew on board, ten in number

200—Crew picked up by Solway, twenty-one hands and Master.

202—Eight seamen on board Ocean Queen.

Rodger's Small Palmed Anchor.—The recent experiments made at Spithead by order of the Admiralty, with this anchor, have afforded another convincing proof of its superiority over the old broad palmed anchor. This is no more than we anticipated; they confirm the opinion we have long since expressed, which

is that of several experienced officers. We shall, however, take the opportunity of adding that of the late Captain of the Cyclops concerning it, whose nautical skill is too well known to require our comment.

H.M. Steam Ship, Cyclops, Woolwich, 29th September, 1843.

Dear Sir—In accordance with your request, I recapitulate my opinion here of the anchor with "small palm" of your construction, used as a bower on board the Cyclops, during a period of nearly four years service, in the Mediterranean, and upon the coasts of Ireland and England, where it performed its part in every way satisfactory; and although 2 cwt. 2 qrs. less weight than the Anchor at the opposite bow, (having a large palm), it was employed upon every occasion with the same confidence.

I am, &c.,

To Lieut. Rodger, R.N. Horatio T. Austin, *Captain.*

Nautical Notices.

Reef off Comorin.—*Extract of a letter from Capt. Hope, Commanding H.M.S. Thalia, dated Bombay, 13th January*, 1844..—At 4h. 30m. P.M., Dec. 4th, 1843, in lat. 8° 4′ 30″ N., and longitude 77° 50′ 0″ E., we discovered to the eastward of Cape Comorin, breakers, N.W. ½ W., three quarters of a mile off; extremes of land, W.b.S. to N.E.b.N., conical rock of Ghaut Mountains, W. ½ S. In standing in, we shoal suddenly from 11 to 3½ fathoms when we saw the breakers, and tacked immediately. We were fully 5½ miles from the nearest land at the time, and had no reason to expect to see any breakers, as according to the Admiralty charts, that part of the coast is bold to the land. Horsburgh does not allude to any breakers off that part of the coast.

Lights on the Coast of Maranham.—A revolving light has been established on Cape Itacaloma, similar to that on the Isle of Santa Anna, and consequently has been the means of losing three vessels.—*Remarks of H.M.S. Gorgon, H. Baker, Master.*

Strait of Bally.—*The Erfprins van Orange* at St Helena reports that the *Amica* spoken on the 1st May, in lat. 35° 40′ and long. 24° 11′ has discovered a sunken rock of considerable extent in the Strait of Bally, not laid down in the charts, with five fathoms water; the south end of Java, bearing S. b. W. ½ W., and the rock Tekan, N.W.b.W. ½ W., called it Verders Bank.—*C. Good Hope, Shipping list, 8th September.—From the Hong Register, 16th Jan.* 1844.

Coast of Norway.—The Norwegian Government has given notice that the following lights will be established in the course of the present year.

1.—Two fixed lights on the island of Udsire in latitude 59° 18′ North, and longitude 4° 53′ 30″ East, visible from 18 to 20 miles distant.

2.—Two fixed lights on Store and Little Torungen Islands at the entrance to Arendal, in latitude 58° 24′ North, and longitude 8° 53′ East, visible from 18 to 20 miles.

3.—A fixed light on the Island Sandvigsoden on the western side of the Channel to Arendal, in latitude 58° 25′ 40″ North, and longitude 8° 52′ 10″ East, visible from 10 to 12 miles.

In order to prevent any of the above lights from being mistaken for those of Marköe and Lindersnœs on the south point of Norway, the light of Marköe will be discontinued on the first July next.

Beacon on the Goodwin Sands.—That this Corporation has caused a standing Beacon to be placed upon the eastern edge of the Goodwin Sands, on a spot

which dries at low water of spring tides, and at which the undermentioned objects bear by compass as follow: viz.

N. Foreland Lighthouse - -	N. b. W.
S. Foreland High Lighthouse -	W. b. S. ½ S.
N. Sand Head Light vessel -	N. N.E. ½ E.
Gull Stream Light vessel -	N.W. ¼ N.

Mariners are requested to observe that this Beacon is surmounted by a ball, which is elevated 51 feet above the level of the sand; and that its appearance is similar to the sketch herewith given. They will also observe, that at the distance of 18 feet below the centre of the ball, there is a Refuge Gallery, easily accessible in case of need, and by which the beacon is rendered at all times readily distinguishable from the masts and balls of either of the floating light vessels in the vicinity of the Goodwin Sands.

By Order,
J. Herbert, *Secretary.*

Torres Straits.—*Beacon on Raine Island, New South Wales.*
Admiralty, July 22nd, 1844.

Sir.—I am commanded by my Lords Commissioners of the Admiralty to transmit to you herewith, for the information of the committee for managing the affairs of Lloyd's, extracts of a letter from Captain F. P. Blackwood, of her Majesty's ship Fly, dated Sydney, 18th of March last, respecting a beacon on Raine Island.

I am, Sir, &c.,
Sidney Herbert.

To William Dobson, Esq., Secretary Lloyd's.

Extract of a letter from Captain F. P. Blackwood, of her Majesty's ship Fly, dated March 18th, 1844, at Sydney, and addressed to the Hon. S. Herbert:—

"I have the honour to inform you of our sailing for Torres Straits to continue our survey, and for the purpose of building a stone beacon on Raine Island.

"I purpose erecting a circular stone tower of 50 feet in height, 25 feet in diameter at the base, and 16 feet diameter at the top, to be painted in black and white bands, each band to be one-third of the height of the building.

"I believe that the beacon may be built in the course of the ensuing season, and when completed, and the track surveyed to Cape York, (which I propose also doing this season,) I have no hesitation in saying that Torres Straits may be as safely passed through as any other strait in the world, and the passage may be made in three days, taking the precaution of anchoring each night whilst inside the reefs."

Shoals and Rocks of the Atlantic.

In a letter to a friend, the Surgeon of her Majesty's schooner Cockatrice relates a singular incident to which he was witness. It occurred on their way from Rio Janeiro to the River Plate, and deserves to be known, that others may be on their guard, and also as it may possibly serve to explain why the Atlantic is laid down in various charts with so many shoals and rocks of uncertain bearing. Vessels of less firm texture and of more imperfect equipment than the Cockatrice may have met with similar encounters without surviving to tell the tale, or, especially if they occurred in the dark, may have been disabled without ascertaining from what formidable antagonist they received the blow. "A very curious circumstance," says the writer, "occurred, as we were coming down, with a whale. I observed a shoal of them sporting nearly

ahead, and went forward and seated myself on the cathead, in order to observe them better. I had scarcely done so when we were in the middle of them; and a huge monster with its back out of the water, coming a little oblique to our course, received the whole momentum of the vessel on his forehead. This must have been stunning, as we were going at the rate of about nine knots an hour, and the vessel felt as if she had struck on a mud bank. This, however did not intimidate him, for he immediately dived, and gave a tremendous lash with his tail across our bow and cut-water, that made every timber in the vessel quiver. Every soul in the vessel rushed on deck, alarmed and wondering; but the spirit of their dream was changed, when the cause of it was explained, and they saw the water in our wake red with blood. The occurrence ought to be published, and I dare say could account for the numerous shoals and rocks with which the Atlantic is dotted."—*Scotsman.*

Captain Warner's Affair.—Our readers are aware that Captain Warner has been again exhibiting his powers in the destruction of a hulk off Brighton. We have seen nothing in the accounts given of the exhibition that has gone beyond the similar destruction of a boat somewhere near Wanstead long ago. Both have been destroyed, but how or by what means or by what process does not appear. In both cases a previous preparation of some kind may have been made, one which might not be possible with an enemy's ship. Should it be so, and to us, it does not appear in any other light, it would remind one of the mice in council agreeing to hang a bell to the cat's neck! We hear of no gun or projectile fired, but the mischief is done. We perceive, however, that Lord Ingestrie is likely to elucidate something more on the subject by a motion in the House of Commons. Till that is obtained we may refer our readers to our volume for 1842 (p. 633,) where they will find a tolerable account of Captain Warner's affair from the same source of information.

Current in the Indian Ocean.—The Victoria, as far as I can recollect, went on shore on a reef, to the windward of Rodriguez on the 7th April, 1843, and was totally lost. About the beginning of May, a report was brought to Port Louis, that pieces of the wreck of a large ship had been discovered by the inhabitants, on the windward, S.E. side of the Mauritius. A Government steamer was sent round, to gather information on the subject, what the result was I forget. But I remember it currently rumoured that many articles were picked up about the same time, on the coast near Flacq. A few days after, a vessel from Rodriguez, brought the news of the loss of the Victoria, and the master and crew. In a conversation with the Captain, he informed me, that on his arrival at Port Louis, he was surprised to find one of his trunks or boxes with his name on it, lying at the police office, where it had been deposited by the person who picked it up on the coast. I do not exactly recollect the day on which I saw the Captain, or the date of the vessel's arrival at Port Louis, but it was somewhere about the 7th of May, and my impression at the time was, that it was about a month after the wreck, when the traces of it were discovered on the Mauritius shore; and having an object in view connected with the subject, I paid more attention to it than I would otherwise would have done.

I mentioned the fact as proving the existence of a current from Rodriguez to Mauritius under ordinary circumstances. That there is a current from east to west, passing the latter island, is well known to the coasting vessels, and for three years I had many opportunities of per-

ceiving this, by the drifting of timber, &c., along the shore. I was at Souillac on the south end of Mauritius for three years, and was always struck with the length of time which the coasting shooners took in returning from Port Louis, and doubling the Morne, a headland, 16 miles nearly due west of Souillac. These fore-and-aft rigged craft, used to take nearly double the time to beat from the Morne to Souillac, that they did from the latter to the former. Many vessels from England to other countries which know this, haul in shore along the coast of the Savane district, to take advantage of the current which sets along that shore from Mahebourg as far as the Morne (Cape Brabant.)

The current seems to strike the shore of Mauritius on the S.E. side, near Mahebourg, and dividing, flows round the southern and northern extremities of the island to the westward. The lee side of it only being without a current.

Theory alone would lead us to expect a current from east and west in the track of the trades, and the current round the Cape of Good Hope evidently is the continuation of it, and prevents an accumulation of water on the east coast of Africa.

A. T.

The Ship Palestine.—In our June number, (p. 343,) there appeared an account of the destruction of the ship Palestine by fire, when the captain and mate, with the crew, left the ship in the long boat and cutter. The former was picked up during a fresh breeze from E.N.E., we learn by a letter from Lloyds, *off the S.W. end of Mauritius*, on the 9th of February, by the Solway, as stated in our account, and the latter arrived safely at Mauritius, on the 12th of February. The boat, which which was abandoned by Captain Maclean, was drifted on shore on a reef, called Bourbon reef, off Port Louis, on the 31st March following. The current which drifted the Palestine's boat on shore, is the same as that alluded to in the foregoing extract of a letter from an officer, who witnessed the effects from the wreck of the Victoria, an account of which appeared in our May number, p. 259.

To Shipowners.—Mr. William Austin, the master of the Patriot, a schooner in ballast, proceeding from the river to Brixham, to wait for freight, was lately fined for not taking a pilot between Erith and the Downs, the decision of the magistrate depending on the law, that a vessel to be exempt from a pilot, must be "employed in the regular coasting trade." It was proved that the vessel was as much in the foreign, as in the coasting trade, and the vessel being unchartered, considered he was right to refuse the pilot: the pilotage being very high on small vessels, and with no freight on board, it will be impossible they can keep the sea, if subject to such charges.

The French Navy.—Sir Charles Napier said, in the House of Commons, that within a month France could have a fleet of 19 or 20

sail of the line ready for actual service. The gallant Commodore is entirely mistaken, and we beg leave to refer him to the following list of *all* the French line-of-battle ships now in existence:—

In Commission.			*In Ordinary.*		
L'Ocean . . .	120	1790	Le Montebello . .	120	1812
Le Gemappes . .	100	1840	Le Santi Petri . .	86	1818
Le Suffren . .	90	1829	Le Neptune . .	86	1818
L'Inflexible . .	90	1839	Le Trident . .	82	1811
Le Jupiter . .	86	1831	Le Généreux . .	82	1831
Le Marengo . .	82	1810			
Le Scipion . .	82	1812	*Under Repair.*		
L'Alger . .	82	1815	Le Jéna . .	90	1814
			La Couronne . .	82	1824
Advanced Ships (en disponibilite),					
Le Souverain . .	120	1819	*Condemned.*		
Le Friedland . .	120	1840	L'Algésiras . .	86	1823
L'Hercule . .	100	1836	Le Nestor . .	82	1810
Le Diadème . .	86	1811	La Ville de Marseilles	82	1812
Le Triton . .	82	1823			

To these may be added some few vessels not yet launched, but in an advanced stage of construction. The *Valmy*, a first-rate, now building at Brest; the *Tage*, the *Fleurus*, and the *Navarin*, second-rates; and the *Hector*, the *Fontenoy*, and the *Breslau*, fourth-rates, might speedily be completed. This completes the list.—*Naval & Military Gazette.*

Boat Regulations at Hong-Kong.

His Excellency the Governor in Council publishes in English (and Chinese) the following translation of Rules for the regulation of boats and junks, and in order to repress the lawless practices of vagabonds.

It appearing that a number of outlaws, have from time to time come from the main land, and adjacent islands, to this harbour, purposely to rob and steel; with a view to preventing similar outrages in future, the following regulations are published for general information, and will be carried into execution half a month from this date.

1. All boats whether small or large, no matter in what business they are engaged, shall be registered, after having obtained a security from some respectable native on shore; those that cannot find a valid security, shall be obliged to leave this Colony, and should they again return, they shall be immediately seized and burned.

2. The number which a boat or vessel bears in the Registry, is to be inscribed in Chinese, as well as in English, in large letters on the sides of the boat, as well as on a flag made for the purpose. And if failing to do so, or neglecting to carry the flag, the offending boatmen will be fined, and on a second omission, will be expelled the Colony.

3. For every class of boats, a Superintendent shall be appointed, who shall be held responsible for the good behaviour of those placed under

his charge, and also be made answerable for any of his boats moving during the night, and for allowing interlopers, and strangers to come into his line.

4. Every boat or vessel failing to conform to the above regulations, shall be sent away from the Colony, and should she return, will be confiscated.

5. Boats or junks of every description on arrival, must within six hours if by day, and twelve if by night, report themselves at the Chinese Secretary's Office, state the object of their coming to this harbour, and the nature of the cargo on board, and place their papers in the hands of the Marine Magistrate until their departure, when they will be returned to their owners. And whilst the junks or boats are in this harbour, the Masters or owners, will be held responsible for the behaviour of their crews, and should they discover that any of the sailors have committed a theft, or other offence, they must give information forthwith to the Chinese Secretary, or Marine Magistrate, that may lead to the discovery of the criminal.

6. To prevent mariners pleading ignorance of these regulations, all vessels will be boarded immediately on their arrival by a Government boat, which will convey these orders in writing. And should the principal man in the vessel neglect to report himself, after the lapse of six hours, if by day, and twelve hours if by night, he will be fined for his first offence ten dollars, and on the second his boat or junk will be confiscated.

7. Boatmen who can give no account of themselves, or show the object of their coming to Hong-kong, will forthwith be handed over to the Chinese authorities at Cowloon.

8. Every honest trader or boatman, engaged in lawful pursuits, will meet with full protection, and no obstacles or delays of whatsoever nature will be allowed to obstruct the object of his voyage.

9. Boats are not to anchor during the night, nearer than one hundred and fifty covids from low water mark. Buoys will be put down to define the limits, and the Harbour Master's establishment, will through the Superintendent of boats, see this rule strictly enforced.

10. Severe example will be made of those who throw any kind of Ballast overboard, viz., for the first offence, a fine of five dollars will be levied; for the second ten dollars; and for the third confiscation. Headmen or Superintendents are to show and explain the regulations to those under their supervision, and to give information of infringement. If not, they will be held personally responsible.

11. No boats are to leave their anchorage, after nine o'clock P.M. and on no account are they to fire guns, let off fireworks, or beat gongs after eight P.M. nor are they to come with shotted guns into this harbour, under a penalty of five dollars.

12. The masters of all passage boats, shall on their arrival bring their passengers to the Chinese Secretary's Office for examination, and if any of them come with the intention of residing in Hong-kong their names shall be then entered in the Registry. On the first omission of the master of a passage-boat, a penalty of five dollars shall be inflicted, and of ten dollars the second, whilst the third will lead to the withdrawal of the licence.

13. Licences to boats will be issued annually. If any boat, having got a licence should wish to quit the harbour immediately, that is, before the expiration of a year, for good, her license is to be returned to the Chinese Secretary's Office. Any new boat coming to ply in the harbour, must be registered within twenty-four hours, and not attempt to ply until she is registered.

The following is the scale of fees, to be paid on registry and licence: Congo boats each 1½ dollar; large fast boat 1 dollar; small ditto ½ dollar; Sampans 1 mace.

The above is published for general information, and these laws will be carried into full effect, with the utmost rigour, from the moment the boats belonging to this place are registered.

A most important Proclamation.

(Signed) HENRY POTTINGER.

A true translation.

CHARLES GUTZLAFF.

Published by order of His Excellency the Governor in Council, &c.

RICHARD WOOSNAM.

Government House, Victoria, Hong-Kong, March 7th, 1844.

PETERHEAD HARBOURS.—Among the proposed improvements in harbours, we perceive by a memorial in the *Shipping Gazette*, that one of no ordinary kind is contemplated at these. It is no less than that of deepening them, from being dry at spring tides, to a depth sufficient to prevent vessels ever being neaped in them. This implies an excavation of at least twelve or fourteen feet in depth, at the cost of erecting coffer dams, &c. Now it appears to us, that allowing all the national importance attributed to them, if the money to be devoted to the above purpose, were employed in erecting a pier, which should extend to the southward into the middle of Peterhead Bay, a safe and commodious harbour would be gained, easy of egress, and at a trifling expense.

STEAM-BOAT COMPETITION it is said, has reduced the deck fares between Newcastle and London, to two shillings and sixpence.

COURTS-MARTIAL.—A Court-Martial took place on board H.M.S. *Ocean*, at Sheerness, to try Lieut. B. A. Wake, late of H.M. Sloop *Pearl*, for insubordination and other charges, on Friday the 5th of July, when the first, second, third, and fourth charge, with so much of the fifth charge, "for that the said Lieut. B. A. Wade, on or about the 24th of May, 1844, was absent from deck during his watch, excepting for a short period, and conducted himself in a disrespectful manner towards Commander Stopford, when questioned by him on the subject," are not proved. Regarding the latter part of the fifth charge, writing a letter of an insubordinate spirit, containing an untrue assertion, is proved; for which the Court reprimands him. The Court then broke up.

A Court Martial assembled on board the *St. Vincent*, 120, for the trial of Joseph Noble, private marine, belonging to H.M.S. *Madagascar*, 44, Capt. J. Foote, on a charge of stabbing Mr. Prothero, Midshipman on board the same ship. The Court, after a most minute investigation of witnesses for and against

the prisoner, found him guilty of the charge, and sentenced him to be hung. Capt. Foote gave the prisoner a most excellent character, and it is hoped that on the minutes of the court martial being submitted to the higher authorities, that the sentence will be mitigated, as the unfortunate man is a quiet, sober, and good soldier.

Cape Breton.—By a recent statute of the Government of Cape Breton, all ships wrecked on the coast are to be taken possession of by the collector of the customs, or any person appointed by the Governor, and the proceeds made available for the maintenance of the passengers, and their transport to their original destination,—a prolific source of litigation.

H.M.S. Racehorse.—Submarine operations are going forward on Largues Point, I. Man, to recover the wreck of this vessel, lost 21 years ago.

H.M.S. Hermes.—Accounts from Jamaica state that the Hermes st.v. has lost 27 men, by yellow fever, during her passage from Jamaica to Bermuda.

Buenos Ayres, May 21.—The English brig the George and Henry, and the American brig, the Susan, have been driven on shore at Montevideo. The Spanish brig, the Minerva is lost at the Buces. Other disasters have occurred; particulars not known.

14th June, the Manchester, st.v. left Hull for Hamburgh,—lost with all hands.

16th June.—The Hellespont, Doe., a small vessel of 43 tons, arrived from Bermuda, in St. Katharine's Docks, with an entire cargo of arrow-root, her length 52·9, breadth, 16·3, depth, 8·2 feet.

27th.—Brig Galona, nearly destroyed by fire in the Thames.

1st July—A substantial beacon, 45 feet high, placed by the Trinity-house, on the Goodwin Sands.

9th July.—The Madras off Deptford, for Ascension and Port Adelaide, nearly destroyed by fire.

Naval Intelligence.

Portsmouth.—Arrivals.—June 20th, *Wanderer*, 18, Com. F. Seymour, from China with specie. 28th put out of commission.—25th, *Queen*, 120, Capt. Martin, from the Mediterranean, 25th, moved into harbour. 10th July paid off.—July 3rd, *Childers*, 18, Com. G. G. Wellesley, from China with specie, moved into harbour.—8th, *Camperdown*, 104, Capt. Martin, from Sheerness, 9th moved into harbour.—*Fearless*, st.v. from Guernsey.—Departures—June 22nd, *Bonetta*, sur. v. Com. Brock, for survey of Archipelago, touching *en route* at Guernsey.—July 2nd, *Sydenham*, st.v., Lieut. Com. D. Mapleton, for Plymouth and Tangier.—8th, *St. Vincent*, 120, Capt. Rowley, for Gibraltar.—9th, *Fearless*, st.v. Com. Sheringham, for Guernsey. In Harbour,—*Victory*, *Excellent*, *Camperdown*, *Collingwood*, *Fearless*. Paid off 28th June,—*Wanderer*, *Queen*, *Camperdown*. Recommissioned,—*Queen*, for flag of Vice Admiral Sir John White at Sheerness.

Plymouth.—Arrivals.—July 3rd, *Sydenham*, from Portsmouth.—11th *St. Vincent*, 120, Capt. R. F. Rowley, from Portsmouth.—15th, *Firefly*, Capt. Beechey.—Departures.—June 21st, *Cygnet*, 6, Com. H. Layton, for Africa, —July 3rd, *Sydenham*, for Africa.—6th *Caledonia*, 120, Capt. Milne, for Gibraltar.—7th, *Fox*, 42, Capt. Sir H. Blackwood, for China.—12th *St. Vincent*, 120, for Gibraltar.—16th, *Firefly*, for surveying the Irish Sea. In Hamoaze —*San Josef*, *Confiance*. In the Sound.—*St. Vincent*.

Sheerness.—Arrivals.—June 21st, *Apollo*, passed up to Chatham. 23rd, *Rhadamanthus* st. v. with troops. 30th, *Prince George* tr. *Dee*, st. v., passed up to Chatham. 18th, *Apollo*, Com. Maclean to sail with troops for Canada.

DEPARTURES.—June 26th *Rhadamanthus*. July 4th, *Camperdown* 80, Capt. for Portsmouth. In Harbour *Ocean*.

WOOLWICH.—ARRIVALS.—June 28th, *Rhadamanthus* st. v., for repair. H.M. steam-vessel *Comet*, is commissioned by Lieut. Prettyman to be under orders of the Captain Superintendent.

CORK COVE.—ARRIVALS.—June 28th, *Alban* st. v., Lieut.-Com. 21th *Tartarus* st. v., Wolf. July 6th *Volage* 28, Capt. Sir W. Dickson. 10th *Rhadamanthus* st. v.—DEPARTURES.—July 4th *Tartarus* st. v. 6th *Albion* 80, Capt. Lockyer.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

CAPTAIN—F. Hutton

COMMANDERS—C. H. Douglas—M. Donellan.

RETIRED COMMANDERS—G. Elrington and G. Decordoux.

LIEUTENANTS—W. L. Partridge, J. O. Johnson, C. S. Dunbar.

MASTER—G. S. Hall.

DEPUTY INSPECTOR OF HOSPITALS—E. Hilditch.

MEDICAL INSPECTOR—J. Lidell.

SURGEON—H. J. S. Beveridge.

APPOINTMENTS.

CAPTAINS—W. F. Martin (1824) to *Queen*—J. Bowker (1811) to Greenwich Hospital—J. C. Carpenter K.H., (1821) Out-Pension Greenwich Hospital—F. Bullock to *Porcupine*.

COMMANDERS—E. Hawes to *Royal Sovereign*—J. W. Morgan to *Queen*.

LIEUTENANTS—C. J. Austen, W. L. Partridge (1844) to *Agincourt*—A. N. Fairman (1829) to *Warspite*—W. Lee to Semaphore station, Chelsea—Hon. P. Pellew to *Collingwood*—W. G. Hemsworth to command *Crescent*—H Stokes (1842) to *Tartarus*—F. E. Johnston to *Illustrious*—A. S. Robinson (1813) to *Porcupine*—W. F. Fead (1838), H. Loring) T. C. O'D. Whipple, and R. Hall to *Queen*—W. Prettyman to *Comet*

MASTERS—G. S. Hall to *Geyser*—W. F. Farrant *to Sydenham*—J. Burdwood to *Eurydice*.

MATES—G. M. Jackson, A. P. Arkwright to *Queen*—R. Chambers to *Firefly*—G. Bellis to *Resistance*—W. De Vere to *Collingwood*—E. H. Blake to *Camperdown*—E. Burstall to *Porcupine*—C. O. H. P. St. John to *St. Vincent*.

SECOND MASTERS—T. Pitt to *Medina*—W. Edwards to *Caledonia*—R. T. Saunders to *Zephyr*—J. G. Anderson, J. North, F. Figden, W. Wilson, and J. Hancock to *Queen*—S. Braddon to *Comet*

MIDSHIPMEN—G. A. Smith to *Firefly*—J. C. Byng to *St. Vincent*—R. F. Calvert to *Collingwood*—T. Bullock to *Porcupine*—P. Johnston to *Camperdown*—H. Benning to *Excellent*—T. Ross to *Albion*..

NAVAL CADETS—F. A. Campbell to *Camperdown*—J. H. Chads to *Cambrian*—W. L. Gordon to *Porcupine*—S. P. Townsend to *Cornwallis*—H. Annesley and G. A Tweedale to *Alfred*—F. M. Kingcome to *Caledonia*.

DEPUTY MEDICAL INSPECTOR—G. King, MD., to Haslar Hospital.

DEPUTY INSPECTOR OF HOSPITALS—E. Hilditch to Jamaica Hospital—O. Evans to Bermuda Hospital.

SURGEONS—C. McArthur, MD., to *William and Mary* yacht—R. H. Brown, to Temporary Hospital at Haulbowline—J. Robertson to *William Jardine*—W. Bruce, to *Queen*—J. H. Acheson to *Victory*.

ASSISTANT SURGEONS—D. Russel to *Fearless*—W. Trail, C. T. S. Kevern & W. Fosken to *Illustrious*—J. B. Collings to *St. Vincent* for service at Haslar—W. A. Leslie to Plymouth hospital—V. C. Clerk, MD., to *Caledonia*—R. Clark MD., E. Elliot, and T. Wolrige to *San Josef* for service at Plymouth hospital—L. C. Urquhart to *Ocean*—G. J. Willes to *Victory*—J. Gordon to *Poictiers*—J. Belcher to *Virago*—J. Fisher and H. Trevan to *Queen*.

PAYMATERS AND PURSERS—G. Dowell to *Apollo*— T. Jennings, (*a*) to *Queen*—G. A. Lance, J. E. Brooman and J. Lewis, act. add. to *Poictiers* for *Cruiser*, *Mutine*, and *Espeigle*.

CHAPLAIN—G. R. Lewin to *Queen*.

NAVAL INSTUCTOR—G. S. Bourne, to *Talbot*—E. Barnes to *Queen*.

CLERK—J. Macdouall to *Comet*—D. Stapleton, to *Camperdown*—J. W. Ancell, (addit.) to *Victory*, for packet service at Southampton.

COAST GUARD.

Appointments.—Commanders Robert H. Elliot, Edward Lake, Lewis Maitland, George S. Reynolds, John Falford, and Michael de Courcy, to be Inspecting Commanders, v. Riley, Mc Ilwaine, Twysden, Newton, Wheatley, and Gordon; period of command expired 5th inst.

Lieut. Thomas Thompson, to command *Greyhound*, R. C., Lieut. William Hay, to command *Lively*, R. C.; Dooley and Hemer, period of command expired 5th inst. Lieuts. Dooley and Hemer, reappointed to command stations; the former to Johshaven, v. Mr. Hughes, superannuated; the latter to No. 2 Battery, vice Lieut. Domford, to Greenwich Hospital. Lieut. Joseph Wright, and Lieut. William Boys, to command stations.

Removals.—Commanders Robinson to the Whitby District; Com. Robert G. Welsh, to Wells; Com. John M. Bate, to Dartmouth, v. Gordon, Riley, and Twysden.

Lieut. J. Robinson, to Ilfracombe in exchange with Lieut. John Coleman. Lewis de Tessier Prevost R.N., has been appointed to Ballycroneen Station, v. Lieut. H. Mc K. Robinson, superseded Lieutenant.

PROMOTIONS DURING THE LAST QUARTER.

CAPTAIN—William Kelly.

RETIRED CAPTAINS (under her Majesty's Order in Council, 10th August 1840) William Holman, John Forbes.

COMMANDERS—M. Thomas, W. Cornwallis Aldhan, Malachi Donnellan, Edward Brenton Stewart.

RETIRED COMMANDERS—(under His Majesty's Order in Council, of 30th Jan., 1816),—William Sandford Oliver, G. Thomas, Robert Trotter, Charles Patriarche, George Gorge. (Under His Majesty's Order in Council of the 1st Nov. 1830.)—John White (*b*), G. Welsh, T. Burdwood, C. Tilly, J. Nicholls, E. Rowan, S. Briggs.

LIEUTENANTS—G. Baker, W. Peel, E T. Hinde, G. W. Preedy, L. R. Fitzmaurice, Lord C. W. Butler, Hon. T. A. Pakenham, C. T. Compton, P. W. Coventry.

MATES—(Appointed) O. Malcolm, C. Read, C. Wake, J. R. Harward, C. Des Veux.

SECOND MASTERS—S. K. Freeman, C. Parsons, J. G. Anderson.

INSPECTOR OF HOSPITALS—J. Liddell, M.D.

SURGEONS—R. J. Scott, A. Woodcock.

NAVAL INSTRUCTORS—K. M. Knapp, F. W. Fowler, F. W. Smith.

PAYMASTERS AND PURSERS—W. H. G. A. Lance, W. H. Wiseman.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

June 25, at Liverpool, the lady of Com. E. G. Fanshawe, R.N., of a son.

June 22, at Clifton, the lady of Com. W. S. Thomas, R.N., of a daughter.

May 12, at Colabah, the lady of Lieut. J. W. Young, I.N., of a son.

June 28, the lady of Lieut. J. B. Willoughby, R.N., of a son.

Marriages.

June 22, at Flixton, Capt. Williams, R.N., to Sarah, daughter of the late Jas. Forbes, Esq., of Hutton Hall, Essex.

July 2, at Westminster, P. A. Boyle, Esq., Commander, to Agnes, daughter of J. Walker, Esq.

July 10, at Stonehouse, Com. Stewart to Charlotte Augusta, daughter of Capt. J. Foot, R.N.

Deaths.

Lately at Stonehouse, Capt. P. Sturgeon, R M.

June 27, at Leamington Spa, Capt. M. Head, R.N.

June 9, at Eling, Com. R. Tomlinson.

June 23, at Malta, Mr. G. R. West.

July 22, Mrs. Brady, daughter of the late Capt. J. R. Lumley.

July 21, at Cornwall, Com. Nicholas.

OUR MEDITERRANEAN FLEET.—The *Sydenham* steam vessel, Lieut. Com. D. Mapleton, arrived at Gibraltar, from Devonport and Tangier, on the 9th instant, and immediately sailed from that port to Barcelona, with despatches for the Ambassador, and was to proceed thence to Malta, with instructions to Vice-Admiral Sir E. Owen, the Commander in Chief. Sir E. Owen, in the *Formidable*, 84, with the *Aigle*, 26, Captain Lord Paget, were on their paasage from Malta, and the *Sydenham*, met the Admiral at Barcelona. By this time he will have arrived at Gibraltar, and the *Albion*, 90, Captain N. Lockyer, C. B., and the *Caledonia*, 123, Captain A. Milne, will not be far distant.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st June, to the 20th July 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	F.	30·04	29·96	64	76	54	77	S	S	3	4	bc	bc
22	S.	29·82	29·86	66	77	58	78	SW	SW	2	2	bc	bc
23	Su.	29·86	29·86	69	84	55	86	SE	SW	3	2	bc	b
24	M.	29·93	29·75	73	82	65	84	S	SW	1	4	bc	bc
25	Tu.	29·66	29·68	48	59	57	59	W	NW	1	1	or (2)	or (3) (4)
26	W.	29·74	29·80	47	62	55	63	NE	N	2	2	or (1	o
27	Th.	29·84	29·88	56	62	52	64	N	N	2	2	od (2	o
28	F.	29·97	30·01	58	66	51	67	N	NW	1	1	o	bcm
29	S.	30·11	30·09	63	73	52	74	SW	SW	1	1	bcm	bcm
30	Su.	29·98	29·94	64	73	56	74	E	E	2	3	b	bm
1	M.	29·90	29·90	64	71	53	73	SE	SE	2	2	o	bctlr (4
2	Tu.	29·86	29·87	55	62	53	63	N	N	2	2	or (2	bcm
3	W.	29·92	29·88	58	64	52	66	SE	S	2	2	op 2)	o
4	Th.	29·69	29·66	53	67	58	68	SE	S	1	1	or 1)	o
5	F.	29·62	29·64	62	59	55	65	W	NE	1	1	othr 2)	or 3)
6	S.	29·84	29·88	56	59	51	60	N	N	1	1	o	o
7	Su.	22·97	29·98	57	66	54	68	NE	NE	2	2	o	bcmr (4
8	M.	29·96	29·96	59	69	52	70	NW	NW	1	2	o	bcm
9	T.	29·90	29·92	63	69	57	70	NW	NW	2	3	bcm	bcm
10	W.	30·00	30·00	62	72	53	73	NW	NW	2	2	bcm	bcm
11	Th.	29·91	29·95	66	73	59	74	W	W	2	3	bc	bc
12	F.	29·92	29·94	62	92	58	64	NW	NW	4	5	bc	qbcp (3)
13	S.	29·95	29·81	62	62	54	68	SW	SW	4	6	bc	qor (3) (4)
14	Su.	29·53	29·70	62	67	56	68	W	W	8	7	qbcr (1	qbc
15	M.	29·87	29·85	61	73	52	74	W	NW	6	6	qbc	qbc
16	Tn.	30·03	29·98	63	65	50	66	SW	SW	3	3	o	o
17	W.	30·04	30·00	59	64	47	67	N	SW	1	1	bcm	op (3
18	Th	29·78	29·78	60	68	54	68	SW	W	4	5	bc	qbc
19	F.	29·74	29·86	56	53	47	64	W	NW	2	2	o	bctp (3
20	S.	30·09	30·20	58	71	47	72	NW	NW	2	2	bcm	bcm

JUNE, 1844.—Mean height of the Barometer=22·993 inches; Mean temperature=61·7 degrees; depth of rain fallen 2·09 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Thanks to an unknown hand for the *Monte Video Reporter.*

The last Canto of the Voyage of H.M.S CORNWALLIS, will be inserted in our next.

The Publishers request that orders for the *Nautical Magazine*, may always express the year with the number required, as new numbers are commenced afresh annually.

The Index to the 13 volumes of the Nautical Magazine now completed, is ready for the press. As the printing must depend on the demand it is likely to meet, Subscribers requiring copies are requested to express the same through their Booksellers.

Hunt, Printer, 3, New Church Street, Edgware Road.

The Barrier Reef, near Raine Island, *from lat.* 13° 30′ 0″ *S. to* 9° 55′ 0″ *S.*

[In the March number of the *Nautical Magazine* p. 184, will be found some concise directions for ships going through Torres Straits, to pass through the Barrier Reef by the opening in which Raine island is situated. And in our last number p. 527 is the notice from the Secretary of the Admiralty of the intention of Capt. Blackwood to erect a stone beacon (50 feet high, 25 feet in diameter at the base, and 16 feet at the top) on this island. With the view of assisting in making as fully known as possible, among masters of vessels, this very important aid to the safe navigation of the dangerous locality in question, we insert the following notice of the Governor of New South Wales on the subject, with a further set of directions for entering the Great Barrier Reef at Raine island since received from Capt. Blackwood in command of H.M.S. *Fly*.]

Notice to Masters of Vessels intending to go through Torres Straits, by Raine Island.—His Excellency the Governor of New South Wales desires to make it known to all masters of vessels proceeding from Sydney for the Torres Straits, that Capt. Blackwood, of the Royal Navy, now commanding her Majesty's ship *Fly*, has intimated to his Excellency his intention of placing on Booby island a quantity of bread, fresh water, meat, and spirits, as a provision for shipwrecked seamen who may seek a refuge on that island; and his Excellency earnestly invites masters who may visit Booby island, after having successfully passed the Straits, to make from time to time, such addition to the store established by Capt. Blackwood as may suffice to keep up a constant supply of provisions on the island. Directions for finding the provisions will be left at the place called the Post-office on Booby Island.—*Government Gazette.*]

From the sand bank, in lat. 13° 42′ 55″ S., and long. 141° 17′ 30″ E., the reef runs N.N.W. for eighteen miles, when in the latitude of 13° 27′ 0″ S. a good opening of nearly three miles wide will be approached, having a very small sand bank on its southern extreme.

This opening bears from Cape Sidmouth S. 82° E., twenty-six miles, and has a shoal patch of small extent near the northern part of the channel, the passage being clear on either side of it.

From the lat. of 13° 27′ 0″ S. the reef runs due north for twenty-two miles without a practicable entrance, to the lat. of 13° 3′ 0″ S., where there is another channel very similar in feature to the one last described; it is three miles in width with a small shoal patch in mid-channel.

From this entrance a remarkable round hill bears N. 89° W., the coast being twenty-six miles distant, and the peak of C. Direction N. 64° W. The Barrier Reef now draws in to its nearest limit from the coast (it being at Cape Direction, lat. 12° 51′ 30″ S., long. 143° 35′ 25″ E., not more than fifteen miles from it,) running N.b.W., passing Bligh's Boat Entrance in 12° 51′, and Cook's Providential Channel in 12° 35′. These entrances are so narrow and tortuous that it would only be men in such extreme circumstances as were these two distinguished navigators, who could be excused in taking them. At this point the sea within the Barrier appears much clearer of dangers, and from the inner edge of it to the reefs and islets which form the outer boundary of Capt. King's route, there appears to exist a comparatively clear sea of at least fifteen miles in width.

From the lat. of 13° 3′ 0″ S. to 12° 25′ 0″ S., the reef runs in nearly a due north line without any good openings, a small detached reef lying three miles from the main body in the lat. of 12° 35′ 0″ S.

At this latitude the boundary line of the reef assumes a totally different feature, trending to the north-east for twenty-five miles, and then forming a series of deep bays, having many narrow channels through them, which require a more detailed description.

In the lat. of 12° 25′, four miles from the main body of the reef there lies another small detached reef, having deep water all round it, and a clear channel between it and the Barrier. Due north five miles from this detached reef lies the wreck of the "Ferguson."

The hull of this vessel will probably exist for many years, as it is thrown high up on the body of the reef, and forms a conspicuous and useful mark to the mariner who might be inclined to approach the reefs at this spot.

From the lat. 12° 20′ 0″ S. the reef trends away to the north-east in one unbroken line for twenty miles without an opening to the lat. of 12° 12′ 30″ when a salient point of the reef having on it some remarkable black rocks, and forming the south extreme of a deep bay will be seen; and may be rounded closely by a ship wishing to enter at this part of the reef. Lat. of these Black rocks 12° 12′ 30″ S., long. 144° 0′ E. These rocks (which are always visible, and at low water considerably elevated above the main body of the reef,) may be closely rounded; and a W.S.W. course steered for six miles, which will carry into soundings of 18 fathoms. This is a good entrance, as it is completely in smooth water, and on the lee side of the great body of the reef, but a very careful look-out must be kept for one or two sunken patches, which exist just within the edge of soundings; they have ten feet on them, and are well indicated by the discolouration of the water.

Having got a mile within the edge of soundings at this point, Sir C. Hardy's island will bear N. 50° W. twenty-eight miles.

There are several narrow but safe passages at the head of this bay, which have been frequently used by ships steering through the barrier. The best called Nimrod passage" bears N. 40° W., ten and a half miles from the Black rocks and is a safe channel of one-third of a mile in width.

The wreck of the ship "Martha Ridgway" lies thrown up here on the reef, bearing three miles south from Nimrod passage. Three or four narrow openings exist here, and should a ship have steered in to the westward of the Black Rocks, it is recommended that she should take the first opening that offers, however narrow, in preference to attempting to haul on a wind, and work out of the bay, which is here ten miles deep; the northern extreme of the bay lying N. 20° E., six miles from the Black rocks.

The lat. of Nimrod entrance is 12° 6′ 0″ S., long. 143° 52′ 0″ E., and a ship steering in for it on that parallel would pass the northern extreme of the bay at a short mile distance on the starboard hand, and run ten miles before entering the passage.

This northern extreme has been supposed hitherto to be a detached reef by ships taking that channel.

From this northern extreme of Wreck Bay, in the lat. of 12° 6′ the reef runs out in the shape of a promontory, which extends due north for

three miles, and then turns sharply away to the north-west, forming a deep bay very similar in feature to Wreck Bay, having several narrow but safe openings at the head of it.

A detached circular reef of two miles and a half in extent lies due north four miles and a half from the northern extreme of the above-named promontory. It is quite bold, and there is a clear passage between it and the Great Reef. Its lat. is 11° 58′ 0″ S.

From this detached reef a N. 30° E. course (mag.) for nineteen miles will place a ship at the southern extreme of a great detached Horse-Shoe Reef, in lat. 11° 50′ S., or should a ship make the Black Rocks, and have obtained a good latitude to determine her position, a N. 20° E. course for twenty-four miles will place her in the best position for entering by Raine island, or at the southern extremity of the Horse Shoe reef abovenamed at a distance of two miles from the breakers.

A ship proposing to enter the Barrier reef by the passage near Raine island, (and it is the only one to be recommended along the whole line of reef) should shape her course so as to make the southern extreme of the large detached Horse-Shoe reef, which is in lat. 11° 50′ 0″ S., long. 144° 11′ 0″ E.

While outside the reefs a current of one knot per hour and more in blowing weather, must be allowed for, setting to the north-west, and no means should be omitted of ascertaining the ship's position in latitude, for should this entrance be passed, the only remaining practicable channel is the Pandora entrance, situated in lat. 11° 26′ 45″ S.

Having obtained a good latitude, and sighted the breakers, which may be safely approached within a mile; a (north) compass course must be steered for eight miles along the outer edge of the detached reef; when this distance being made, if the weather be clear Raine island will be seen bearing N.W.b.N.

It must be remarked that this detached reef is irregular in form, not unlike the letter S., the northern part of the reef being the top part of the letter. It will, therefore, form a bay which must be carefully avoided, as it has no outlet.

The true bearing of Raine island from the outer and northern extreme of this detached reef is N. 26° W., ten miles.

The latitude of the northern extreme of Raine island is 11° 35′ 10″ S., long. 144° 6′ 0″ E., and it may be distinguished from any other sand bank of the same description on the reef, by having a quantity of coarse green vegetation on it, which shows plainly at five or six miles distance. (The sandbank of Pandora entrance having no vegetation whatever on it, and bearing due north nine miles from Raine island.) A reef extends above water one mile, running out from its south-east extreme, and both islet and reef may be boldly approached; the islet is nearly twenty feet above the sea level, and may be clearly seen ten miles in fine weather from the mast-head of a ship.

The islet being sighted and clearly made out, a N.W.b.N. course for seven miles will place a vessel in the centre of the channel south of Raine island, and having brought the island to bear north by compass, distant two miles and a half, a S.W.b.W. (compass) course for nine miles will bring her in sight of the main body of the reef, and into soundings of 32 fathoms, coarse coral sand, and the reefs will have

been fairly entered by a good and safe passage of four and a half miles in width.

A good passage of two and a half miles in width also exists north of Raine island.

In taking this northern passage, the northern part of the island (which is quite bold) may be passed within one-third of a mile or less, and a south-west (mag.) course steered for ten miles, by which means three or four sunken patches having the least water three fathoms on them, and which bear W. ½ N., four miles from the island, will be avoided.

Should it be in the afternoon when the reefs are entered it would be safer to anchor shortly, as there are two or three sunken patches laying about a mile from the south extreme of the entrance, which must be looked out for.

Good anchorage will be obtained in eighteen and nineteen fathoms coral sand, within five minutes after striking soundings. If early in the day, and having obtained soundings a S.W.b.W. course for thirty miles may be steered for Sir Charles Hardy's northern island which is in lat. 11° 54′ 40″ S., long. 144° 11′ 0″ E., or thirty-eight miles from Raine island.

The variation of the compass was 4° 35′ E., the rise and fall of tide ten to twelve feet, and the time of high water at full and change 10h. P.M., at Raines island.

This large opening in the reefs (a good seven miles from north to south) occasioned the tides to run in different directions, but the flood-tide sets in from the eastward, and at the springs two knots per hour. The direction of the ebb was irregular.

Should a ship by any accident find herself to the southward of 11° 50′ S., and inside of the great detached reef above described, she might take Stead Passage, an opening of one-third of a mile across in lat. 11° 55′ S. with a sandbank on its north side, which being entered Sir Charles Hardy's high peak bears W. 5° S., twenty miles, or if daylight sufficient, it would be preferable to steer a N.N.E. course along the outer edge of the Barrier for ten miles. She will by that means enter between the detached reef and the main body of the Barrier by a clear and broad channel of four miles in width, and would soon discern the termination of the great reef on her larboard hand, which she may round closely, and anchor in 18 fathoms, when she will be in the same anchorage previously described.

A remarkably perfect specimen of the circular coral reef on a small scale (half a mile across) lies a little detached from the south-west end of the great detached reef, and where anything like a mark is valuable, it might serve to distinguish the locality.

No bottom could be obtained in any of these bays outside the reefs, with 150 fathoms of lead line.

It is to be recommended that any ship getting fairly into any of these bays in the reefs, and not too much daylight before her, should take the first clear passage that offers, however narrow, in preference to attempting to beat out, which she would probably fail in.

From the north point of the reef which forms the bay of Raine island, and which lies N. 34° E., five miles from it, the Barrier stretches

for six miles in a N.W.b.N. direction, when a good opening of two miles in width will be seen having a sandbank on its southern point. This appears to be the locality of the loss of the Pandora frigate. This sandbank is about eight feet above high water mark, about a quarter of a mile long and quite bare of any vegetation whatever. It is in lat. 11° 26′ 45″ S.

The sandbank should be rounded at the distance of a short half a mile, and a S.W.b.S. course will then carry clear through an inner line of reef, and the main body of the reef fairly entered, good anchorage in eleven fathoms will be obtained with the sand bank north-east distant a short mile.

From Pandora entrance the reef runs N.E.b.N., seven miles, and is intersected by numerous small but narrow openings unfit for shipping, and then gradually turns away to the N.b.W., running for a space of nearly ninety miles in an impenetrable line of reef, until Murray island is approached.

Yule opening in the lat. of 10° 22′ 0″ S., and long. 144° 1′ 0″ E., is quite the best, but a rapid tide runs through it, at least five knots per hour.

H.M. ships Fly and Bramble entered the reef by a narrow but safe channel in lat. 10° 12′ 0″ S., with the high peak of Great Murray island bearing N. 15° W. (true), but the whole line of Barrier reef in this part is much less broken by channels, and certainly not to be recommended for shipping, as the tide runs through what channels there are with uncommon rapidity.

Great Murray island (the peak of it) is in lat. 9° 56′ 30″ S., and long. 144° 5′ 30″ E., by the mean of several good observations.

F. P. Blackwood.

Notes of a Voyager.

"Disguise thyself as thou wilt, still Slavery, still thou art a bitter draught."

"A Negro has a soul an' please your honour, said the corporal doubtingly."—Sterne.

Sir.—I have often asked, and often been asked in England, what were the facilities for a vessel's procuring refreshments at the Cape de Verd islands, without either being able to give, or receive, a satisfactory reply. Having occasion to call there lately, and remain sometime I will now endeavour to give some information on the subject. Wishing to pass the Cape de Verds, without calling, I would recommend all vessels to pass to the westward. They may sight St. Antonio with safety, and thus confirm the rates of the chronometers; passing inside the islands, is at least unpleasant, and the wrecks which are yearly occurring prove, that it is dangerous. The only port in these islands, where water and stock can be procured with facility, is Port Praya, in the island of St. Jago. Bound there, and approaching these islands, the greatest caution must be observed. There is an almost constant haze hanging over them, particularly in the summer months; and when ap-

proaching, the surf on the beach is often the first announcement of a vessel's proximity to the land. I would prefer passing forty miles to the eastward of Sal, and to steer so as to be about twenty miles to the eastward of Bonavista, when on its parallel, taking due care, to make such an allowance, for an almost constant south-west current, as the previous days' observations may have proved to exist.

The celebrated Bonetta rock, the existence. or rather non-existence of which, you have so ably discussed in the *Nautical*, excited in me a desire in passing, to endeavour to confirm your opinion; with this view I passed over the spot, or as near to it, as the conflicting statements respecting it enabled me to judge, the lead going, and a constant look-out kept, without the least symptom of either broken, or discoloured water; at this time the sky overhead was quite clear, although the horizon was so obscure,* as to prevent my seeing Bonavista, when only twenty miles from it.

Once past the parallel of Bonavista, I would haul up for Mayo, taking care to keep sufficiently to windward. Mayo is clear all round, except the reef lying off the north end, which always breaks, and may easily be discovered in time; passing either end of the island, and running across to St. Jago, no difficulty can be experienced in entering Port Praya, from the copious instructions given in the Books of Directions.

Port Praya is a spacious bay, well sheltered from the north-east wind which prevails nine months in the year; during the months of July, August, and September, the wind is frequently from the south-west, seldom blowing home, but always accompanied with cloudy weather, and a heavy swell. Even at this season, I consider a vessel perfectly safe, particularly if small; she can be moored, under the inner end of Quail island, in 3 to $3\frac{1}{2}$ fathoms in smooth water. When at anchor, it is necessary to wait for the visit-boat, which generally boards in about *an hour;* everything proceeds in the same poco-a-poco fashion here, and there is nothing but indolence to encounter. The port charges amount to about twelve Spanish dollars; a custom-house officer remains on board until the vessel sails, for whom they charge a quarter-dollar per day in addition: a trifling duty is also imposed on all stock taken on board. Water of an excellent quality can be procured at one dollar per puncheon, the casks being taken from the vessel empty, and brought back full, from a cistern on the beach, to which it has been brought in pipes. If a vessel does not remain at anchor twenty-four hours there are no port charges, this fact, however, is kept carefully concealed, and every obstacle that laziness and inactivity can produce, is thrown in the way of the vessel's escaping payment, this, however, with the slightest exertion on the part of the British Consul, could easily be obviated; but, during my stay, there was no consul there, that gentleman taking up his abode in Bonavista, alleging that Port Praya, during the summer months, is unhealthy. Bonavista may be cooler, and a little more comfortable, but I cannot understand why Porto Praya, should be sickly, as there is almost a constant north-east breeze, and the land is light, having no rank vege-

* A circumstance which has led vessels when near the land, to suppose themselves many miles from it—Ed.

tation or swamps to create misma. I come to the conclusion, not from the length of my personal observation, but from the replies received in answer to numerous enquiries made amongst the natives on shore.

Stock and fruit are cheap and plentiful at Port Praya, good bullocks, weighing about 350 lbs. cost twelve dollars, fowls four dollars per dozen, turkeys one dollar each, sheep four dollars each, oranges half a dollar per 100, plantains and bananas cheap; these are the cash prices of the article, but they may be obtained on barter for old clothes at a very favorable rate. A jew from Rosemary-lane, with his stock in trade, might drive an excellent business in these islands, bartering his old clothes for native produce.

The greater number of inhabitants are negroes, many being free; only a few officials, and five or six military officers having any pretensions to be called white: the soldiers are negroes, at present under the command of a Pole, in the Portuguese service, they are by no means badly equipped, or disciplined; the whole inhabitants are, however, in a half civilized state, caused I suppose by their confined intercourse with strangers. The airs of some of the officials, and would-be great men, were very amusing. One of these calling himself captain of the port, went on board during my absence to offer his services in mooring the vessel. He was habited in a sort of undress naval uniform, with an enormous pair of moustachios, imperial, &c., and to complete his anomalous appearance, a large pair of brass spurs on his heels, similar to those worn by our staff officers. The mate very properly refused his assistance, judging of his nautical capability from his external appearance; and, I learned that he would have been entitled to four dollars, for merely uttering the words "Let go the anchor:" very possibly the only English ones he knew. I saw this same official on board several vessels afterwards, in the same rig, and would seriously recommend his joining the "horse marines" without delay.

These islands are fertile, and capable of great improvement. Under a good government they would soon become valuable. At present the only revenue is derived from the orchilla weed, which is a government monopoly. The inhabitants make cotton cloths for the African market: fine cotton grows on the islands, and here I first saw the old-fashioned distaff and spindle in use. There are some beautifully fertile valleys in St. Jago, and plenty of ground capable of producing coffee, sugar, and other tropical articles.

In fulfilment of one stipulation of Lord Ashburton's late treaty with the United States, they have now a squadron on the African station, consisting at present of a frigate, two ship-sloops, and a brig; they have chosen Port Praya as their head-quarters, and during my stay the sloops Saratoga and Decatur, came in, both, only a short time from the States; they are two of four ship-sloops, which have been lately built for government by different constructors. The Decatur is about 700 tons, carrying eighteen 32-pound carronades, and two long 18-pounders on the forecastle; the Saratoga is a large vessel of 900 tons, and carries sixteen 32's and four 68's all Paixham guns. The officers said, however, she worked very much on her upper works, and leaked considerably in bad weather, in consequence of her heavy armament. This vessel had a novel equipment, designed to preserve the crew from the heavy rains

and dews on the African Coast. It is a grated platform, extending horizontally in-board, from the top of the bulwarks about four feet, carried right round the vessel, from the top-gallant forecastle to the small poop, which forms the Captain's cabin, and supported underneath by iron stauncheons between the guns, it has an iron rail on its inner edge, and a tarpaulin cover when raining. This vessel would be a fearful overmatch for any of our small sloops, particularly with their present ridiculous armament of carronades; almost every officer I ever met, complains of their utter inutility in the armament of a small vessel, and the first-lieutenant of the Decatur assured me, that had there been the least prospect of war he would not have joined that vessel with her present armament All the American men-of-war have constantly their full war establishment of officers, and even each of these vessels had a commander, four lieutenants, master, purser, surgeon, three mates, and four midshipmen.

I had considerable opportunity of observing the internal economy of the Decatur; as regards the officers in their conduct towards each other, it was a perfect liberty and equality system; to the men, however, it was downright tyranny, the colt was rarely out of the hands of the boatswain's mate, and the cat was also in frequent requisition: the midshipman of the watch would, on the slightest pretence order any man a colting, and often I fancied through caprice. What a fine thing this liberty and equality seems, when descanted on by the Radical and Chartist demagogues at home. How they prate about the liberty of the subject, the freedom from taxation, &c. in America, and endeavour to render themselves, and their hearers, discontented with their own country. I am only surprised that they do not betake themselves to this El Dorado of their imaginations; means of conveyance are now plentiful, cheap, and I fancy no veto would be put on their leaving the country.

These ships are nominally on the station for the purpose of capturing slaves. However, they will not trouble them much, as the feeling of the generality of the officers is decidedly in favour of slavery. One of them, in his peculiar style, "Guessed that his father had a pretty considerable lot of niggers, and he calculated to raise some dollars out of them when the old man died." It is difficult for a stranger to conceive the hatred which an American bears to a negro, and the utter contempt with which he speaks to him. The same officer told me seriously, that he considered a negro only as the connecting link between a man and a monkey! I would like to lead some of our soi-disant liberalists, and praisers of America, to the city of Charleston in that country, and to any place of worship in that city, either Episcopalian, Presbyterian, or Dissenting, and then they would see a separation, not of the righteous and ungodly, but of the black and white, aye! down to the remotest shade of colour,—to free, well educated, wealthy people of colour, driving their own carriages, does this unholy separation extend; one door and one side of the church or chapel being appropriated to the white, and another to the coloured. The laws of South Carolina relating to the negroes are the most barbarous that can be conceived, and a disgrace to men calling themselves civilized.

Any man of colour going to this same city of Charleston, a free-born British subject, either as master, mate, or sailor *on board a British*

vessel, is immediately on the vessel's arrival seized by the constables, dragged to the common jail, thrust among common malefactors, and fed, I should rather say starved, on jail allowance. He is so kept until the vessel goes to sea, and then sent on board. I certainly consider such conduct as a national disgrace to such a country as Britain, a complete desecration of her flag, to allow her subjects to be thus dragged from under its protection. Let Lord Brougham, and the other philanthropists, who are so constantly employed in inducing the Government to suppress the slave trade, look to such facts as these, and, instead of sacrificing the lives of so many valuable and gallant officers and men, every year on the most unhealthy coast in the world, endeavouring to force opinions on nations who are far too weak to resist, endeavour to ameliorate the condition of the negro by other, and more pacific means. When in England I state such facts as these, I am met with a look of incredulity, which plainly says, "I don't believe you." However, they are plain truths, which cannot be denied; not matters which have occurred years ago, but which are now occurring daily, at the present time.

This same treaty of Lord Ashburton's with the United States, has given an impetus to the Brazilian slave trade, which it wanted of late years. Previous to that treaty, no American vessels were allowed to go to Africa without being searched, and in all cases when guilty of contravening the Slave Act, seized and condemned. Now, however, it is very different. The Americans plainly construe the treaty into this:—we have now a squadron on the African coast, (situated as I have already shown at the Cape Verds,) to prevent our vessels doing wrong, and you British shall not examine them: the fact is, they are *not* examined, and American vessels are weekly leaving Rio Janeiro, with full cargoes of goods for slave dealing without interruption. Nay, while I was in Rio, an American Brigantine loaded in Liverpool a cargo of slave goods, came to Rio Janeiro, and afterwards went to the coast. These same American vessels are very often sold in Rio previous to starting, to carry the goods under the American flag, (their flaunting flag of liberty,) to the coast, and on their delivery, the vessel is delivered up to another owner, and captain who has the requisite Brazilian or Portuguese papers, and having loaded her cargo of slaves, often arrives in safety in the Brazils. More slaves have been safely landed during the previous six months, than for 18 months before, and I hold it most decidedly *infra dig.* in a nation like Britain to be thus *treatied* or bullied into permitting what she forces other, and more powerful nations to submit to.

St. Helena.

"Perhaps in this neglected spot is laid
Some heart once pregnant with celestial fire,
Hands that the rod of empire once had swayed."—Gray.

The Island of St. Helena has now become of considerable importance, as a place of call for refreshment, for our homeward bound Merchantmen. Its anchorage is of easy access, the Island being high, seen at a

considerable distance, and free from hidden dangers. It is also quite safe, and may be reached by night as well as day, by following the instructions in the direction book. It is much to be preferred as a place of call for all India ships, or others coming round the Cape of Good Hope to Table Bay; getting into the latter and leaving it, always incurring the loss of three or four days, although provisions and refreshments are much cheaper there than at St. Helena. Water, and anti-scorbutics, however, the principle articles required in a long voyage, are plentiful, cheap, and easily procured at St. Helena, and the vessel need not be longer than 24 hours detained on her voyage. The trade wind being almost constant, and nothing in the way, a vessel may be got under weigh at any hour, either day or night. Fresh provisions, vegetables, and particularly all naval stores, are excessively dear in St. Helena: beef and mutton is generally 1s. per lb., fowls, 30s. per dozen, eggs, 5s. per dozen, potatoes, 15s. and 20s. per cwt., other vegetables and fruits in proportion. Any article of naval stores coming from England, is always charged 80 to 150 per cent. above home prices. These extravagant prices are caused more by the monopoly hitherto enjoyed by certain parties in the agency of vessels, than the scarcity of the articles.

The external appearance of St. Helena, does not give any idea of its internal capacity for production, the abrupt volcanic masses of rock forming the sea boundary, being mostly destitute of vegetation. A ride into the interior of this beautiful island, however, soon undeceives the voyager, and as he surmounts the respective ridges, or winds round the various hills in the road, the eye is delighted with the most magnificent scenery, luxuriant vegetation, and the various well wooded, and neat country seats of the several proprietors. The view from the country church, as well as that comprehending the valley, below Plantation house, is most agreeable and interesting. The first sight also of Sandy Bay, from the ridge above it, is truly grand, forming one vast amphitheatre of undulating hills, and wooded valleys, covered with luxuriant vegetation, relieved at intervals by handsome country houses, surrounded by highly cultivated gardens, while on the ridge beyond the bay, stands in bold relief against the deep blue tropical sky, the striking mass of scoria called Lot's wife, as well as other masses of inferior size, although no less remarkable appearance. The roads throughout the island are very good, and kept in excellent repair, they are everywhere accessible to horses, and in most places to carriages. There is a vast quantity of excellent land in this island still uncultivated; property is not at all expensive, and two or three practical farmers with a little capital, might soon realize a comparative independence by cultivation. During the time the island was under the management of the East India Company, and particularly during the time it became the residence of Napoleon, so much wealth poured into it, from the salaries of the various officials, that every one could live well, by the almost spontaneous production of a little garden, the rearing of a few fowls, or the pasturing of a few sheep. Now, however, they have begun to bestir themselves a little more, and it is to be hoped, that in a few years, vegetables and stock, will, from increased competition, be reduced to moderate prices, thereby in-

suring a regular supply to the various vessels, and inducing many more to call, that are at present prevented by the expense. Upwards of one thousand merchantmen called at this Island during the year 1843, notwithstanding the depressed state of trade.

To all visitors to this beautiful island, the remembrance of Buonaparte, and his connection with it, forms the grand attraction. Every object, place, and person in the remotest manner connected with him, becomes of importance, and it must be a hard heart indeed that can visit his last dwelling-place, and travel by his favourite path to the much-loved spring, and first resting place of his remains, without yielding him the deepest sympathy, and lamenting the inordinate ambition which reduced him to such a state. The opinion of the old inhabitants, who were at St. Helena during his residence, respecting his continued complaints against the Governor, is, that they were generally groundless, and only agitated by himself and followers, with the intention of adding to the sympathies of the liberal party in England, which he erroneously considered he possessed. Perhaps the papers left for publication by the late Sir Hudson Low, will elucidate this subject. It must, however, be admitted, that it would have been much better to have given Buonaparte Plantation House for a residence, undoubtedly the best on the island; as every one must allow that Longwood, even with the additions made before, and subsequent to his taking up his abode in it, afforded miserable accommodations to a person accustomed to the Imperial residences of France. His late residence at Longwood, converted into farm offices, as it has for years been, presents a most melancholy appearance, his dining room, contains a winnowing machine, his reception room affords accommodation for fowls, and his bedroom is a stable! The walls of the whole are completely covered with the names of visitors, and some pithy sentences in French, indicate no very gentle degree of displeasure at the treatment of their almost idolized emperor. According to a never-failing English custom, in all parts of the world, money must be paid to view Longwood, miserable as it is, as well as the tomb, the house and ground surrounding the lakes, are, indeed farmed by a Mrs. T——, at a considerable yearly rent.

The spot chosen by Napoleon for his grave, is most beautifully situated at the head of a narrow, sequestered vale, sheltered by trees from the prevailing wind, as well as the gaze of the passengers on the road above. It was I believe a favourite resort of his when living, and close to the favourite spring from which he was wont to drink, and from which water was carried by the domestics, for use at Longwood. The tomb remains open in the state in which it was left, when the coffin was exhumed, and still contains the stones strongly bound together, which enclosed it. It is still most appropriately shadowed by the willow, under which it was originally made, and while reclining under its shade, contemplating the tomb, and all around, so hallowed by the memory of its illustrious occupant, it is difficult even in imagination, to comprehend the eventful times, and extraordinary events which rendered that memory so celebrated. From the poor friendless Corsican boy to the successful officer of artillery, from the general of the revolution to the conqueror of Italy, from the first consul to the emperor, and from the latter to the prisoner on St. Helena, we view a succession of

events in the life of an individual, the most extraordinary that the world ever saw,—raising himself from comparative insignificance by his own undoubted talents, to be the first general of the age, the emperor of the French, and the ruler of the destinies of Europe, hurling himself from that pinnacle of glory by his own inordinate ambition, and insatiable thirst for power. Here on this lone rock, he expiated his folly, and shortened by discontent and unmanly irritation, the short alloted span of human life.

The tomb is shewn to visitors by an old veteran English soldier, who has resided in a cottage above it, ever since Napoleon's death. He was an orderly to the governor at the time of Buonaparte's arrival, and transferred to wait upon General Bertram in the same capacity, at Hutts Gate, where he resided. Subsequent to Napoleon's death, he obtained his discharge, and resided close to the tomb; when at the exhumation of the remains, he was recognized by an old companion of the Emperor's exile. His long and faithful services, were represented to the present worthy King of the French, who granted him a pension of £40 a year, with which, and his pension as a British soldier, he lives very comfortably, enjoying his cottage rent free, as a compensation for his services as a cicerone to visitors, in which capacity he relates many anecdotes of the celebrated parties amongst whom he was once employed. Steam and the Overland Route, have, now however, very much reduced the number of India passengers by the Cape of Good Hope; and Mrs. T. is very much inclined to say with Othello that

"Her occupation's gone."

The Seal of Lord High Admiral in 1471.

A leaf from history, not a dry and withered one, but one that is interesting as well as instructive is now and then acceptable. With this feeling we are induced to snatch one from an elaborate work which has just appeared from the pen of a lady, who has

"Wasted the midnight oil,"

in its compilation, and toiled "most wearisomlie" in vindicating the cause of truth.

The work* to which we allude, and which has been pronounced by our leading Reviews as reflecting on the author "great credit for her laborious attempt to vindicate Richard's character, and for the patient care with which she has sought out and marshalled her authorities," affords a passage or two from those dark and perilous ages, which closely concern the naval history of our country. The earliest account we have met with of the old system of pressing seamen for the service of the navy, and the appointment to the office of Lord High Admiral, occurs in the time of Richard the third,—the latter while he was Duke of Gloucester, and the former during his eventful reign. We shall, therefore, make the following extract from the work before us, merely premising that it was when his brother Edward the fourth had re-established himself on the throne, after the important battles of Barnet and Tewkesbury had

* Richard the third, as Duke of Gloucester, and King of England.—By Caroline A. Halsted. Longmans, London, 2 vols., 8vo.

overturned for a season the hopes of the House of Lancaster, and in the subsequent short-lived splendour of Edward's reign, that the Duke of Gloucester, afterwards Richard the third, was invested with the honors of Lord High Admiral.

"Richard, young as he was, (scarcely nineteen,) possessed in a strong degree, and had nobly exercised those qualities which are peculiarly estimated by the really great,—undeviating fidelity, fraternal affection, and firm unshaken gratitude. And he gained his reward, for it is evident from the brief records that have been transmitted to posterity, that he was henceforth considered fitting to be invested with military authority of the greatest importance, and had civil powers delegated to him, that attest, beyond the reach of calumny, the high consideration in which he was held by his sovereign, and by the nation at large.

"This point has been rendered more apparent, by the discovery, a few years since, of a rare and very intesesting relic belonging to this prince, viz., the original seal fabricated for him at this period of his history, as Lord High Admiral of England. The inscription that encircles this official signet, proves that Richard of Gloucester was not only nominated a second time to that important office, upon the death of the Earl of Warwick, who had been created Admiral of England during the brief restoration of King Henry the sixth, but also that he was invested with the earldoms of Dorset and Somerset, which had become extinct in the Beaufort family, by the death of the Duke of Somerset to whom Gloucester was so directly opposed at Tewkesbury; with which forfeited title he was probably rewarded in consequence of the principal share he had in the victory there obtained by Edward the fourth. This seal which is delineated in the following engraving, is

in the most perfect state of preservation. It represents the Admiral's ship with the mainsail filled, bearing the arms of France and England

quarterly, with a label of three points ermine, each charged with a canton gules—a distinction borne by Richard as a younger branch of the Plantagenet family. On the forecastle, which is embattled and adorned with fleur de lis, stands a beacon, and under it hangs the anchor.* On the square sterncastle, which is adorned in the same manner, stands a dragon, supporting the admiral's flag, with the same coat armour."† The inscription round the margin of the seal is as follows:—

S. Ric'i Duc' Glouc' Admiralli Anl' & Com' Dors' & Soms'.

[Sigillum Ricardi Duce's Gloucestria Admiralli Anglia & Comitis Dorset & Somerset.]

The history of the discovery of this seal is replete with interest. It is of brass, and is in all respects perfect and uninjured. It was the property of Mr. J. Hankay, an attorney at St. Columb, in Cornwall, who purchased it in a lot of old brass and iron, amongst the household goods of Mr. Jackson, an innkeeper of that town. How Mr. Jackson became possessed of it does not appear; he was a native of Cumberland, from whence he removed to Devonshire and afterwards to St. Columb, where he died. He seemed not to put any value on the seal, nor to have ever mentioned it to his family. Richard, Duke of Gloucester resided frequently both at Penrith, Carlisle, and other places in Cumberland, during his wardenship in the north, which helps to explain, in some measure at least, how the seal probably came into the possession of a native of that county.

Upon the death of Mr. Hankay, in 1782, it became the property of Mr. Dennis, attorney, of Penzance, and shortly after an impression was forwarded to the Society of Antiquaries, by the Rev. Dr Milles, Dean of Exeter, together with the foregoing account, and some further very interesting particulars connected with its history.

It appears probable that this curious seal was wrought between the years 1471, when the Duke of Gloucester was invested for the second time with the office of Lord High Admiral of England, and 1475, when King Edward the fourth advanced Sir Thomas Grey, the Queen's son by a former marriage, to the dignity of Marquis of Dorset. *See Archæologia, vol. 7, p. 69.*

The occasion on which the system of pressing seamen for the king's service, is first mentioned after Richard the third holds his first parliament, among the measures adopted by parliament to preserve the peace of the realm. The determination of the Earl of Richmond's party to establish him on the throne, rendered this necessary, and after

* The anchor argent, gorged in the arm with a coronet, and a cable through the ring, and fretted in true loves knot, with the ends pendant, or ; is the badge of the lorde admiral of England, as he is commander-in-chiefe over all the king's naval forces.

"The Earl of Southampton, Lord High Admiral in the reign of Henry the eighth, used the badge of an anchor, so likewise did the Duke of Orkney, hereditary Lord High Admiral of Scotland, as his official badge. Edward, Earl of Lincoln, Lord High Admiral in 1556; George Villiers, Duke of Buckingham, 1619, and James, Duke of York, brother to Charles the second, used it as the achievement of the Lord High Admiral."—*Retros. Review, 2nd series, vol. 1, p. 302.*

† Archœologia, vol. 7, p. 69.

their solemn meeting at Vannes in France (1483), "the Cinque ports were ordered to send out ships to watch the movements of the Bretagne vessels; and a strong fleet under Sir Thomas Wentworth was stationed in the Channel to guard every approach to the English coast . . . . . Ships were purchased from the Spaniards to increase the naval force and extend its operations to the coasts of Scotland and France. John, Lord Scrope of Bolton, was nominated Captain and Governor of the Fleet; and Commissioners were appointed "to take mariners in the king's name for the furnishing of the ships, and to do service upon the sea."

It would have added to the interest of the foregoing could we have transferred a copy of the warrant itself, and of another dated at Scarborough in 1484, to which the sign manual is affixed. The object of the authoress has been to remove from the memory of this monarch the unfounded obloquy with which it is loaded, and by tracing the authorities for many grave crimes with which he is accused to their foundations, and sifting their testimony as well as the motives of their authors, she has done much for the cause of truth, and placed the real character of Richard the third, in a far more favorable light than it has hitherto been considered. The student in English history will greatly delight in these pages, and he who would have any pretensions to a knowledge of it *must* read them.

Captain Beechey's Artificial Horizon.

London, August 6th, 1844.

Sir.—With reference to an article in your last number, on a new instrument for obtaining altitudes at sea when the horizon is obscured, by Capt. F. W. Beechey, you will, perhaps, permit me to state, that the principle of optically expanding the motion of the vane of the instrument, so as to cause it to correspond with the relative motion of a distant object viewed through the telescope (or, as Capt. Beechey expresses it, to cause the "artificial horizon, and the object when brought together, by the index glass of a sextant, to remain in contact throughout the whole range of the field,") owes whatever merit it may possess to myself; it having formed the principle of an instrument which I showed to Capt. Beechey, at his request, in February last. I am sure he will have no hesitation in confirming this statement in its fullest extent; although, from his description, it might be inferred, were the matter unexplained, that he claims it as a discovery of his own. Capt. Beechey informed me at the time, that he was contriving an instrument on a perfectly different principle, viz. that of the dipleidescope, though as he observes in a note, which now lies before me, with slender hopes of success.

I must be permitted to say, that the communication in question was certainly regarded by me at the time as confidential; and I supposed this point to be so clearly understood, that it was unnecessary to have a formal recognition of it.

But the matter is of no great moment; as the important and characteristic principle of my instrument (and the arrangements connected

with this part, being then immature, were neither shown nor explained to Capt. Beechey,) was the principle of compensation applied to the pendulum, by which the disturbing forces arising from the ship's motion, were counteracted, and the position of the vane left uninfluenced save by the directive force of gravity. If this object can be realized, the observer will no longer be embarrassed by any oscillation whatever; and it is possible that the instrumental horizon may come to be practically preferred to the natural one, even when the latter is unobscured. How far I may succeed yet remains to be seen; but I have thought it only justice to myself to make this explanation, that I may not be hereafter accused of borrowing from Capt. Beechey, while carrying out my own ideas.

I am, &c.,

J. H. Bass.

Fragments from the Dardanelles.

(Concluded from p. 486.)

The Sea of Marmora (*Mermereh denizee*) is in round numbers about 100 miles long and some 50 broad, receiving, from the narrow Bosphorus above, the waters of the Black Sea, or Euxine, which are then thrown off through the Dardanelles or Hellespont, into the Grecian Archipelago below, at the rate of three and four knots an hour, in their constant downward course. This inland sea is deep, full of excellent fish, has but few dangers, exhibits two or three pretty groups of islands, possesses very picturesque shores, many fine towns, Rhodosto for instance, and numerous villages, and altogether affords a snug cruizing ground whose attractions are far too often neglected by yachtsmen and other travellers, who generally, it appears, seem to think a passing glance at its northern or European coast in the route to or from Stamboul enough and all sufficient. But tourists who have time should certainly, and not rapidly, *make the whole circuit of the Sea of Marmora*, land at its villages and islands, and inspect their antiquities.

There is yet indeed much to be seen besides Brusa between the Gulf of Nicomedia, (*Izmidd Keurfuzee*,) and the peninsula of Artaki, (*Cyzicus*). And the river Oostvola, the ancient Granicus, the grave of so many Persians in the time of Alexander the Great, surely deserves a visit from every man whose education has made him at all acquainted with the gallant deeds of "Philip's warlike son." * * *

October 22nd, 1836.—P.M. The Sea and Island of Marmora are visible from the Dardanelles, as low down as Gallipoli, in the bay of which European place our schooner is still at anchor. The distance to the island of Marmora from Gallipoli and its opposite town, Lamsaki, is not 50 miles; bearing nearly due east; but as the island is rather high it can easily be discovered when a long way off. To a landsman, it is true, it might sometimes appear to be a cloud rather than land.

Gallipoli, the ancient Callipolis, is said by some to have been the

very first conquest of the Turks in Europe. The accounts given in the concluding volumes of "Gibbon's Decline and Fall," are not so generally interesting as that in the first volume of the "Turkish History, by Richard Knolles," whose sixth edition, folio, appeared in 1687, in London. Knolles tells us at some length, that the Turks first obtained a secure footing lower down the straits than Gallipoli; that is to say, near Maito and the present old or inner castle of Europe, *Kilid-ul-bahr*, opposite Tchanak Kalessi. It appears that rather before their "invasion," a Spaniard, a Catalonian, one Ronzerius, sometime a notable pirate, and a most famous captain, offered his services to the Greek Emperors Andronicus and Michael, then ruling at Constantinople, against their oriental enemies the Turks, still confined to Asia, but nevertheless gradually making their way westward. The followers of this Ronzerius, whose exploits would furnish forth an admirable novel, were chiefly Spaniards and French, and they manned "four tall gallies," containing altogether "two thousand good souldiers." Good they might have been, as clever cut-throats, but certainly not trustworthy, since after merely raising the siege of Philadelphia, now *Allah shehr*, they plundered the very Greeks they had been hired to assist, Ronzerius coolly alleging that he and his men had not pay enough according to the promise of the emperors, and that therefore he and they must live upon the people! After plundering right and left in Asia Minor, these free-lances returned to Callipolis, whence Ronzerius with two hundred men, passed on to Orestias, had there an interview with Michael, roughly demanded money, was over-insolent, and got then and there cut to pieces for his pains. Whereupon his followers killed, in revenge, all the citizens of Gallipoli, and fortifying the place made it their own, took again to piracy, fitted out eight gallies under a Captain Tenza, spoiled every ship passing up or down the straits, and ravaged the country also. But the Genoese at last defeated Tenza, who had so long snapped his fingers at the luxurious Greeks, upon which reverse, the pirates obtained aid from the fanatic "sons of the prophet," and this, says Knolles, "was the first calling of the Turks to Europe."

The Emperor's forces were soon collected, and as soon beaten at *Apri*, yet, strange to say, instead of pushing this great success, the pirates suddenly split into factions, and roving away on other expeditions seem to have abandoned Gallipoli. Their recent allies, the Turks, in some number accompanied them, but these mussulmans by and bye requested and obtained from the Greeks, permission to return home unmolested. *viâ* the Dardanelles. The Greeks as usual broke faith with them, and a general row continued, till the Turks were well plundered, and kicked, not escorted, back to their Asiatic homes. This was not forgotten; time rolled on, the Greeks fell into discord among themselves, while Sultan Othman was laying slowly, but surely, the strong foundations of the Turkish empire. In 1327, the Sultan and his son Orchanes, or Orchan, obtained the city of Brusa, and their horse-tails proudly fluttered on the shore of the sea of Marmora. Othman died: Orchan had now learned much about the Dardanelles, and longed for a position in Europe, and as luck would have it, one of his captains, "through a fair young gentlewoman" surprised and kept the Castle of Abydos, over against Sestos. Through the treachery of this Greek lady, the Asiatic Castle had been

won, and thence Solyman, the sultan's son, secretly passed the straits by night, and learned through a Greek of the male gender, the way to surprise the European castle of Zembenic near Sestos, "before the Christians should thereof be aware." And thus Solyman with 2000 Turks took Zembenic, and then Maito, 2 miles from it, and ravaged the country for some twenty miles above it, overturned the governor of Gallipoli in the field, in 1358, and not content with taking Gallipoli itself, the Turks became soon afterwards masters of Adrianople. This Solyman died before Orchan his father, so that Orchan was, without doubt, the first Turkish sultan who had any possessions whatever in Europe; yet Gallipoli was not his first possession. Well, the Osmanleys have now held their ground among us for about five hundred years, and, for my own part, I would rather see the Dardanelles, and the Bosphorus, in their hands for ever, than in those of Russia or Greece. The Turk is a good friend to England if he is properly handled, though he can't quite forget Navarino, of which, by the bye, the anniversary has just occurred, (Oct. 20, 1827.) This is to day, Oct. 22, 1836: yesterday was the anniversary of Trafalgar, I remembered that, but Navarino had almost slipped my memory. *N'importe.* Here at Gallipoli there is at present no *djenk gehmissee* (man-of-war). Two, however, their brass or bronze guns glittering, remain still at anchor off Lamsaki or Lapsaki, about three miles from us; their blood-red *byrack* looks fierce enough, and the white crescent and star in it form a very pretty device. The Turkish flag really seems to improve on acquaintance. But *vice* white and black, they should certainly paint their ports black and red. * * *

I may here record that in round numbers the following distances may be taken as nearly correct:—

Length of the Dardanelles . . .	14	leagues.
From Gallipoli and Lamsaki to Marmora island .	14	"
Width of passage between Marmora and the European main	3	"
From Marmora island to Constantinople . .	23	"
" Constantinople to Therapia on the European shore of the Bosphorus . . .	3	"
" Constantinople to Booyuk-dereh, also on the European shore	4	"
Constantinople to the Black Sea . . .	6	"

So that for general purposes the distance between Gallipoli in the Dardanelles and Constantinople may be called 100 miles. This passage (Gallipoli to Stamboul) by the steamers Maria Dorothea, Ferdinando Primo, and the other Austrian boats is generally done in *fourteen hours,** and with a very fair wind sailing vessels may now and then do

* French steamers began to run as passage-boats in the Levant in 1837, the Austrians before that period. It appears by Fellows' "Journal in Asia Minor in 1839," (p. 84), that the usual time required by the French boats (which are larger but not better, if so good as the Austrian,) for the voyage from Tchanak Kalessi below Gallipoli, to Stamboul is twelve to sixteeen hours. But Mr. Fellows adds, that on the 8th of March, 1838, he took a passage under the tricolour which lasted *forty-eight* hours, during which he states "the mingled snow and spray made it difficult even for the crew to remain at their posts." He was the only passenger in the principal cabin "which had every requisite of splendour and luxury, *but no fire or stove.*" His complaint of the French

it in nearly the same time. We intend, fair beeeze or foul, to try our schooner's luck again to-morrow: and for to-night have we not "Purdy's Sailing Directory"* to amuse us?

Sunday, October 23rd.—The rain has ceased, and although we may truly say in the words of the poet,—

"The sky is overcast, the morning lours,"

being very *marmoun* as a Turk would say; yet the wind has veered a few points in our favour, and now, 7 A.M., we are, for the third time, standing out of Gallipoli roads,† under reefed topsail, mainsail, and jib, and on the larboard tack, once again on our way towards the Sea of Marmora, with a very strong current against us, and a stiff breeze. The Dardanelles become much more open and wide above Gallipoli.

We kept close to the European shore, which, from the recent rain, gladdened the eye by a rich and glittering green, that no painter's brush can imitate. Here and there rose majestic hills divided by verdant valleys, and at intervals on the coast, was seen some village or hamlet, towards which the light caïks of the fishermen, or *ballickjees* were standing under snow-white cotton sails, dashing the spray from their prows, and at times almost buried in foam, which sparkled like a shower of diamonds in the sun, as it flew fast and far to leeward.

Through one of these European valleys it was once proposed to cut a ship-canal in order to unite the sea of Marmora with the Gulf of Saros, to the north and west of it, which might very easily be accomplished

Were this carried into effect, vessels would, with northerly winds, beat up the Gulf, (instead of taking the Dardanelles) and pass at once by the canal into the sea of Marmora; once through, they could reach

officers "never shaving or dressing," I need not notice here. The steam route from Constantinople to Smyrna, a distance of eighty leagues, generally performed in thirty-six to forty hours, is fully described in "Knight's Oriental Outlines," p.p. 208—230.

* In addition to this book, a traveller's cabin library, for these parts, should contain Murray's Guide, the works of Slade, Pardoe, Quin, Claridge, Usborne, Countess of Grosvenor, Hon. Mrs. Damer, Marquis and Marchioness of Londonderry Urquhart, Rose, Macfarlane, Frankland, Emerson, Carne, Leake, Gell, Madden, Knight, Major Boyd, Davids, Reid, and Hervé.

† Shoal near Gallipoli.—In January, 1834, a letter appeared in the *Nautical Magazine*, from Captain Middleton, confirming the existence of a shoal above Gallipoli, "marked in Norie's new chart as having seven feet upon it." Captain Middleton had previously doubted the existence of the danger, but he states in the above letter, that "an English vessel lately got on shore, about where this shoal is designated." The same vol. of the *Nautical* (vol. 3, 1834,) contains at p.p. 517, 582, some remarks by Capt. the Hon. F. W. Grey, H.M.S. *Actæon*, on the navigation of the Dardanelles, the sea of Marmora, &c. At p. 582, Capt. Grey says (in his passage from Therapia to Vourla,) "we anchored in the Dardanelles in 13½ fathoms, Gallipoli light W.b.S., six or seven miles. In starting in the morning with the wind still westerly, we cast in shore, and in two casts of the lead shoaled to seven fathoms, and in stays to four and a half, which shows that it is necessary to use some caution in approaching the shore here" Capt. Middleton's "observations on the navigation of the Dardanelles," appeared in the *Nautical Magazine* of March, 1833, (p. 113,) and have since been copied into Purdy's Sailing Directory. See also the *Nautical Magazine*, August, (1844,) p.p. 484, 485, relative to the shoal near Gallipoli.

Constantinople without difficulty, blow the wind whence it might. But having now the Straits as their only passage, they are frequently two or three weeks, and sometimes months in accomplishing the distance between Tenedos and Gallipoli or Lamsaki, a distance only of about fifty miles, such as Sheerness to London. We ourselves reached Tenedos on the third instant, (Oct.) and it has thence taken us three weeks—less a few hours—to reach the Sea of Marmora; it being to day Sunday the 23rd of October.

Monday, Oct. 24.—During the latter part of yesterday, the wind again increased to a gale, compelling us to strike our main-top-mast, to send down fore-top-gallant-mast and yard, and to close-reef. The distance between Gallipoli in the Dardanelles, and the entrance of the Bosphorus, is, as I have said, about 100 miles. About midway, but nearer to Gallipoli, lies the fine island of Marmora, distant from the main rather more than three leagues. "In sailing through the sea of Marmora, no directions are necessary; the chart is sufficient for all purposes." (Purdy's Directory, p. 167.) But a good look out must be kept on the European shore, when the wind is northerly, as terriffic squalls occur every now and then in the vicinity of the mountains which overlook the channel between Marmora and the main, and the line of coast immediately to the eastward, or nearer to Constantinople. The weather has indeed been squally enough, both yesterday and to day, but it has well answered our purpose, since yesterday, at 7 A.M., we were leaving Gallipoli roads, and this morning, our sixty-third day from England, at 7, A.M. we were near enough to Constantinople to see H.M. ship, *Volage*, 28, Capt. Richards, (at anchor far outside the Seraglio and Scutari,) loose sails to dry, and hoist a red ensign. The Turks hoist their colours at sunrise, not at eight or nine o'clock, according to the Frank custom. In approaching Constantinople we again got up our masts and yards, and with colours flying, beat along the European shore, and then stood over to the Asiatic side, near the large new barrack below Scutari, off which there is a pole beacon, and thence kept that coast on board, till in short tacks we reached the anchorage below the Maiden's (sometimes called Leander's) tower, *Kiz Koulessee*, where we brought up and rode well. We here delivered our letter-bags to harbour-master Ross, who came off to us from *Tophana* and who also, in reply to our enquiries as to the plague, said it was too true, that it was now worse than it had been for 25 years, and that six thousand Turks, and one hundred and seventy-five Greeks, besides Jews and Armenians, had died of it in Constantinople and the suburbs, within the last week!!! We hear among other cases that twenty-two trunk-makers died in one street in the same forenoon. Soapboilers are seldom, if ever attacked. In the house immediately opposite *Stampa's*, the well-known ship-chandler of Galata, three children have just expired together, and the rest of the family are now "wooded in," they have the barrier-gate erected at their walls, which cuts them off from all the world, and all the world from them. Mr. Privalagio, dragoman to Mr Black, late chief of the factory, is now dead, (25th Oct.) People are falling dead in the street, nearly all the Bazaars are closed, yet such confirmed fatalists are the people here, that notwithstanding all the clamour about contagion and infection, a *hammal* or quay-porter thinks

nothing of carrying off on his knot the corpse of a man deceased of plague, and then returning to convey a bale of goods from some ship to a merchant's warehouse. A glass of water now costs five farthings, most of the city fountains are dry; till yesterday and to day, there has scarcely been a shower of rain for eight months. We luckily filled up our casks in the Dardanelles.

Saturday. October 29th.—Heard to day that the yacht Enchantress, with Mr. Edmund Smith and family had arrived in the Horn, and that the brigantine Mischief, may be daily expected. A fair wind from the Dardanelles is at last blowing, and the port is becoming crowded; more than two hundred sail having been detained in the straits by contrary winds for weeks past. H.M. steamer *Medea* is in the Dardanelles.

Sunday, 30th Oct. 1836—Breakfasted on board the Crescent, steamer, Capt. Wade, in the easternmost of the two dry docks in the Tersaneh, or dockyard and arsenal, situate above the new wooden, and only bridge in the Horn. The Crescent is here shored up for a repair in her keel, having grounded near the Seven Towers; part of the damage she then sustained was at once remedied by a Turkish diver, who, while she was afloat, and of course without bell or helmet, went down and fastened some sheet-lead on her bottom. This still remains, and is very neatly done. These fellows remain down a minute, and sometimes longer; they are to day caulking the dock-gates, and seem to be extraordinary divers and swimmers.

Once ashore, a man *must* pick up a few Turkish words: Italian is the most useful European language, then Spanish, which is spoken by all the Jews, and here in the capital English is much better understood than French, except perhaps in the diplomatic regions of Pera, called I believe by the Turks *Beg oghlou*. The verb to "bring," or "fetch," or "get," is so much like English, that it cannot be forgotten when once heard, being no other than "get," with an addition of *eer* or *oor*; as, *at getteer*, bring, or fetch a horse; *at* being the Turkish word for horse. *Attesh-getteer*, bring a light; a phrase uttered often enough, as pipe after pipe is smoked out in the *Khaveh-hanehs*, or *cafinets* according to the general orthography of travellers. *Tootoon* is the tobacco for the *tchibook*, or common cherry-stick pipe; *tambaccoo*, the weed for the *narghileh, i. e.* the water-pipe, or hubble-bubble. *Is-tehr-im*, (I write by ear,) means I want; *ter-jew-man is-tehr-im*, I want an interpreter; and oddly enough, most of them are Jews. *Ter-jew-man*, or *dragoman*, are nearly the same words in their general acceptation. *Ingleez-ben-im*, means "I am an Englishman;" *heh-kim-ben-im*, "I am a doctor." *Rackee* indicates spirits, *sherrab*, wine, and *shecker* sugar; *tchah-book*, make haste; *yahvash*, take it easy, stop a bit, not so fast; *savoulah*, make room there, clear the way; *i-dee*, push on; *tcheck, tcheck*, pull away; *evvett*, yes; *belkee*, perhaps; and *yohk*, or *hah-eer*, no. To attract attention, *Bahnah-bak*, look at me, look here, is the common exclamation; or, to be more polite, *Hadjee!* which literally means a pilgrim, a title it is more courteous to give every Turk, than to shout out other words, amounting to "I say, you Sir." It may be well to note, that before actually ascending the stairs of a house in these parts, care should be taken to sing out *destoor?* Is it permitted? in order that any petticoats on the first floor may put up their helms, and quit the

husband's *salaamlik* for their own *hareem*, or place prohibited to all strangers of the male sex. When a man once makes a beginning in pencilling down the words he may daily pick up in strolling among the Turks, he will soon find how much farther, comparatively speaking, a short vocabulary will go with them, than with any Franks. They possess great powers of perception, and make a catch at your meaning which generally comes pretty near the mark. And in shops, and other places, *Pecky, Effendum, Pecky, Pecky!* very good Sir, is often heard with *boo-yoor-oon*, which indeed it is somewhat difficult to translate. When addressed, for one example, to a guest, on entrance, it seems to indicate he is to make himself and his host comfortable, by doing exactly as he himself likes, or on the other hand, as he is requested; *boo-yoor-oon* preceding alike an invitation to sit, to rise, to accept a pipe, or coffee, &c. &c. *Otooroon* is the word equivalent to "Take a seat, Sir."

Let me here bring up. I must abstain from intruding upon the crowded pages of the *Nautical* our gatherings and wanderings in Stamboul*, and *inter alia*, our useless drinking bouts to the success of the unfortunate Vixen, a Russian piracy by the bye, quite as bad as those of the Greeks, mentioned at page 445, of the present volume, except that no lives were sacrificed. My task is now done: I have transcribed with very little alteration, and I fear with less amendment, such light matters from my journals as I thought would suit the general, not indeed the scientific readers of the "Blue Magazine," and as this work is now found on board every man-of-war, and nearly all merchantmen, and yachts, and steamers, I trust those "new hands" who may wend their way to the "City of the Sultan" by sea, may not find altogether useless the hints and crude information, scattered through these off-hand FRAGMENTS FROM THE DARDANELLES.

* In 1837 appeared Miss Pardoe's "City of the Sultan," an interesting work in 2 vols., describing the "domestic manners of the Turks in 1836," the year when the present "Fragments from the Dardanelles" were therein daily penned. Miss Pardoe arrived at Constantinople, Dec. 30, 1835, during the *oroudj* or Fast of Ramazan, and landed Jan. 1st. 1836, on which day "Pera, Galata, and their environs were one huge snowball." When *we* arrived in the Golden Horn, 24th Oct. 1836, we also experienced a cool reception in the shape of tremendous torrents of rain. But whether under snow, rain, or sunshine, Stamboul still presents a most striking appearance: the best time however for visiting the place is between May and September. Yet the September of 1836 was not very inviting, since as I have said the Plague was then intense, and the walls and tanks of the capital nearly all dry. (Pardoe, vol. 2, p. 333.) The "City of the Sultan" contains no description of the Dardanelles, and no appendix giving any phrases in English and Turkish. So far as provisions, monies, &c. are concerned "Words for the Windbound," (Knight's) has supplied this deficiency; "Major Boyd's Turkish Interpreter" has gone yet further; and last, not least, a young Turk is now settled in London, it is believed at Brompton, and he finds no lack of scholars and students willing to learn his native tongue. Steam has brought Turkey so very near to us, that the true traveller must, henceforth, for fashion's sake, learn somewhat of the Turkish language, or confess himself an idler. All the Greek he may have learned at college, won't avail him much in the East, except in reading "old stones." And how many Englishmen are there who know Romaic? Modern tongues are too much neglected even in the present day.

Nautical Rambles.—The Leeward Station during the War.

Port Royal and its Associations.

(Continued from p. 494.)

Having brought our recollection back to the portal of the Havana, a place specially noted in the annals of British naval glory, we are tempted to record here a proposal made by a gallant young officer, who was first-lieutenant of the corvette mentioned before, and who most unfortunately perished as first of the Hero 74, in her exit from the Baltic, but who (unknown I believe to himself) was at the time on the list of commanders.

It was a proposal which for boldness of conception, and for the zealous spirit that dictated it, I venture to say has seldom been made; and, from an intimate knowledge of the cool collected courage, and professional skill of the proposer, I am certain, if it were possible to have been accomplished by any person, it would have been by Lieut. John Norton.*

At the time alluded to, there was a Spanish sixty-four gun ship "all a tanto," lying in the harbour of the Havana; her name, if my memory serves me, was either Africa or Asia. And the main object of the two English inferior vessels of war cruising off that port, was, the presumptuous one of blockading this two-decker, in one of the best fortified places in the world, and preventing her from escaping. Ridiculous as this may sound in the ears of a Briton, it was for a long time effectually performed; and it is a fact that this huge craft was beaten back, more than once, I believe, by an English vessel of war, mounting 18 or 20 guns!

From information which was received, it appears that although the Spanish ship was kept in a prepared state for sea, the greater part of the crew were permitted to be on shore on leave during the night; the Dons, no doubt, believing themselves perfectly secure from molestation, surrounded, as their ship was, by formidable forts. And it was imagined by those in the corvette, that this feeling of security had lessened that vigilance so essential for the prevention of surprise at night.

Under these circumstances and impressions, the gallant young officer who had already established his reputation for active courage and daring adventure, at the storming of Samana, and the cutting out of the enemy's vessels from under the forts of the Spanish main, volunteered his services to attempt the destruction of the sixty-four, by setting her on fire in the dead of the night; requiring for this hazardous purpose, the aid only of the captain's gig's crew! His plan was to use paddles, instead of oars, steal quietly in, when all was shrouded in darkness, and enter the vessel himself, with the necessary combustible ingredients, through one of the stern-ports, which were always left open to admit the fresh air. Descending into the hold, alone, he there would deposit the materials, ignite them, and returning to his boat, proceed cautiously under the bows; and if this portion of the enterprise could not be executed in board by himself, with a sharp knife cut the cables, and retreat with the same caution observed on his approach, leaving the snoring

* Of a Kentish family.

Dons to extricate themselves from the dilemma, in the best way they were able. In one respect, it may certainly be considered a daring, and very hazardous plan; but the latter is a word not to be found in the sailor's dictionary. Had he failed in the attempt and been caught, there is little doubt his life would have been the forfeit; the execution would have been easy enough, *provided* the party was not detected. In the opinion of some more sober-minded persons it appeared rather a romantic scheme, which, although apparently easy in theory, was anything but so, when attempted to be put into practice: nevertheless, from the lax discipline of the Spanish marine, and the circumstance of most of the officers as well as the men, being on shore, there was a probability of the issue, had the enterprise been made, proving completely successful. I am not quite certain whether the captain gave his sanction to the project, and that other matters, requiring immediate attention, called the ship to another part of the coast; but certain it is, the brave young man who was ready to attempt it, never had an opportunity of so doing. Although his gallant services, and high professional qualifications* fully entitled him to the favourable consideration of the naval commander-in-chief, and, undoubtedly, if any thing could, to immediate promotion. It has been incidentally shown, that his merits were not rewarded until a long time after, and unhappily unavailingly; at the very moment when his valuable life, with those of hundreds of gallant seamen, was yielded up in the performance of his duty to his country. First lieutenants, it is well known, seldom gain the good will of midshipmen, and rarely indeed their regard; the best eulogy, therefore, I can record with respect to his disposition and conduct, is to state that there was not a Mid who sailed with him, but made his praise a constant theme in their own ship, and during their visits to others. I may add by way of "rider" that he was a strict disciplinarian, but—he was a gentleman.

The brother of this officer is an old lieutenant. During the war he was for some time acting commander of one of Her Majesty's sloops of war, but was not confirmed, although we believe he had been promised promotion. We need scarcely remark on the effect of disappointment, on the mind of the officer who being thought worthy to fill a superior station from his merits, and for some time, is obliged to fall back into the subordinate ranks, and give place to another, whose interest, happens to be stronger than his. Disheartened by the neglect of his claims, we understand that he quitted England with his family to become a settler in Australia; and thus the service has lost a good officer. It is true, indeed, that there is no want of them, but there are few familiar with the routine of promotion, as conducted during the war, but have seen some who have shot up to high rank from interest that were scarcely suited to fill that of lieutenant: whilst many that would have been a real benefit to the profession, and have done honour to the higher stations, were left in the subordinate list, to moulder away their energies and talents in "honourable poverty," and blighting obscurity.

A remedy has, in a great measure, been applied to this "plague

* Although but a very young man, he was the smartest first lieutenant I ever sailed with, and in every other respect he was an estimable character.

spot," latterly, which there is every reason to hope will, in future, be continued; for a wider range in the distribution of rewards for merit in a profession so obviously important to the stability and fame of the nation, must ensure that power which awes the rest of the world into good behaviour. Neglect is a sad damper to zeal, and though we ought not, when it is our country we serve, to be depressed, and allow it to lessen exertion, yet it is not in the power of many to control the natural feelings which neglect has a tendency to rouse. But we should always recollect that, a non-zealous officer, from whatever cause he may have become so, is hardly worth the remuneration he receives.

Some strong minds, however, which have a corresponding buoyancy of spirit, and when the body possesses the additional advantage of sound health, rise superior to all adverse circumstances. In the course of my observations I have found that not even the coldness of neglect could damp the persevering determination of these, to push through all obstacles to elevation, until they had finally reaped the reward due to their indefatigable exertions, in the hard-earned distinction. Yet, some have gained it and a grave at the same time!

It is impossible, whatever may be the degree of professional merit belonging to each of such individuals, not to admire the spirit which urged him on to attain the end and aim of his wishes, or to sink in the attempt; whether that spirit was sustained solely by ambition, or was comingled with patriotism. It is impossible, I repeat, for the generous heart to withhold its tribute of praise, but is it not lamentable that public worth like this, in many instances, should have been allowed by the awarders of professional virtue, not to reach the prize but with a dying grasp?

To the youthful officer, examples of this sort, whether they draw forth sympathy in the feeling of admiration, or of regret, or both, as the event may turn out, may serve to emulate him on in the rough, but honorable, path he has chosen to follow. And he will not fail to see, and be cheered by the fact that, in the *display* which such a character makes, lies the strength of that interest that is ultimately to serve him, and which singly and unaided he creates for himself, and which becomes irresistible, because the acts of the achiever when reaching a certain stage, claim at once the attention and estimation of those in the exercise of vested power, whose honourable minds are alive to justice, and who, under any circumstances, cannot be supposed wilfully to violate its almost holy precepts.

I have already remarked that, the number of officers is necessarily great in the naval service. This is unavoidable, because there must be a rotation from half-pay to active employment, for obvious reasons; and, unfortunately (?) there exists no possibility of preventing men from becoming old, and therefrom incapacitated. Besides, the severity of the service is such that all, except a few who are happily blessed with very strong constitutions, become prematurely broken down. It is obvious, too, as I have also before observed, that all who are deserving, cannot be promoted to the higher grades. More than enough, however, for selection, there have been, who were capable and worthy to be entrusted with commands; but were doomed never to be so, because political expediency stood in their way, whilst it was the ladder by which others

ascended. Hence the reason why it was said that some who were found in the higher, and others in the middle grade, ought to have changed places.

The subject is one of great moment, although not hitherto so considered by the rulers. It is probable it will gain attention in any future war, for there is evidently a spirit for improvement everywhere abroad, which is winnowing the chaff * from the sea service as elsewhere. It may be said, and, I believe it has been said that, it is difficult for the authorities to determine the individual capacities, for command, of a large body of officers, many of whom have had no opportunity of distinguishing themselves,—that capacity can only be shown by trial, and as all have passed an examination, it is presumable that all are competent. There is, undoubtedly, much force in this reasoning, but somehow or other it was not always apparent during the war.

The officers, generally, of the present time have been more carefully educated and trained, than it was possible those could have been during the active times of the previous protracted war. Yet we still hear of a want of experience and efficiency, which would seem to imply that he who may be deemed theoretically qualified, may not prove quite so competent in practice; and, in some measure to uphold the truth of the remark made above.

There was a successful defence made by a midshipman, named H. Overhead, that was highly spoken of at the time. He was a fine young man, and gave promise of becoming an ornament to the higher grades of the service. On referring to the list, I find his name there as a lieutenant of 1808. Want of interest probably has kept him there, as it has a great many more of similar daring spirit. There was another Mid, by the name of Drew, belonging to the Barbadoes frigate, who greatly distinguished himself by gallantly defending a prize, of which he had the charge, and I believe was severely wounded. He was a very active, intelligent young officer, but beyond the lieutenant's rank, I fear he has not risen.

Boat attacks upon the enemy's armed vessels were frequent, and, although generally attended with success, in a few instances they failed, principally, if not solely, from a want of knowledge of the places where the privateers were lying. These harbours were in Cuba, St. Domingo, and Porto Rico; and with respect to the failure of the actions of our smaller vessels of war, with the gun-boats and schooners of the Spaniards, in the Spanish main, from La Guayra to Porto Bello.

The boats of the Desiree, Success, Dedalus, and other ships, with the most persevering energy and bravery, were among the number that made the attempt, in which some valuable lives were lost, and several officers wounded, among whom were Lieutenants Pakenham, Bayley, and Hughes. The first named officer was the son of Captain Lord Longford, (who was blown up in the Resistance frigate, whilst in action with an enemy's ship, in the East Indies,) and was wounded in both arms. He had previously distinguished himself in a tender, belonging to the Desiree, and like his noble father, subsequently perished, when captain of the ill-fated Saldanha frigate; which vessel was unfortunately lost

* Not of person, but of practice.

in a severe storm, in an attempt to run into Lough Swilly, on the west coast of Ireland; all on board perishing! He was one of the most kind-hearted, generous, and heroically brave officers I ever knew, and there are few, whose sudden removal from life, have created more general and sincere regret.

The next officer, after a long, and meritorious service in the arduous station of a first lieutenant, was promoted to the rank of commander. He received a very severe wound, his nose having been literally severed from the face, and only prevented from falling by a small piece of the under skin: fortunately he preserved it by instantly replacing it, and holding it with his left hand, whilst with the other he was engaged in a death struggle with the Captain of the privateer. Overwhelmed by numbers the gallant boat's crew were made prisoners. Singular enough, in so warm a climate, this brave officer without surgical assistance, effected a neat and complete cure of his wound, by merely applying the pitch from the seams of the deck to it, and allowing the plaster to remain undisturbed until the cut had cicatrized.

The last named officer was a nephew of the late Admiral Sir William Essington; he was a cheerful, active little fellow, and had entered upon his naval career at a very early age, he was a mere boy-lieutenant, and died at a premature age. One or two lieutenants were killed in these contests, belonging to the Success and Drake; and a promising young Mid, a brother of the present Admiral Ross, C.B.

Among the snug retreats of the privateers on the south side of Cuba, where it was found difficult or impracticable to get at them, from a want of sufficient knowledge of the places, were Rio Cre or Crese, Yatina, and Escondido, Trinidad, Isle of Pines, Bayamo, Batabano, within the Colarádo, and Barraco, at the eastern end. The following account written by an officer of one of H.M. ships, (1821) describing a professional visit to two of these places may prove of service at some future time.

"I proceeded in a canoe alongshore. At 8h. entered Puerto Escondido (Hidden port) eight miles from Cumberland harbour (easterly). At 1 P.M. saw the harbour of Yatena; communicated with a Spaniard, who was on the rocks pegging turtle. Saw a number of bullocks and pigs on the beach. At 10h. opened a point that forms the western shore of Ocoa Bay. The breeze proving too strong for the frail canoe, bore away, and ran along shore within two cables' lengths, the bottom rocky.

"Between Ocoa Bay, and Cumberland harbour, a ship may anchor in from 15 to 7 fathoms water, taking care to select a clear space (sandy) upon which to drop the anchor. At 12h. 30m. hauled into Yatena. A vessel not drawing more than eleven feet, may enter this harbour, keeping the larboard shore on board. From the point on the starboard hand, runs a reef of rocks, inclining inwards, and which is dry at low water. The passage is very narrow, but you may see your danger,* and when inside choose your anchorage. It is two miles in

* We should be inclined to add the caution—"When the sun shines." Where dangers lie in a channel, within the tropics, dark cloudy weather will obscure them, from the water assuming at such times a dark uniform tint; and unless marked they cannot be seen.

circumference, and the beach is lined with mangroves, backed by high hills. It is now used as a rendezvous for pirates, and during the war was the resort of privateers. It is so completely land-locked that you are not able to see a vessel in it, from without. Between this place and Escondido, is a deep bay, with 7 and 8 fathoms smooth water over a sandy bottom.

"At 5h. pulled into, and round the harbour of Escondido. This place is equally snug with Yatena, and is made the same use of by the pirates. A sloop of war may anchor in it keeping the larboard shore aboard until passing the reef of rocks on the starboard hand, then haul to starboard and choose your anchorage ground.

"A ship sending her boats into Yatena after an enemy's vessel, the officer must be prepared for an attack of musketry on his left, immediately he enters the harbour, from a small beach of sand surrounded with mangroves, where the enemy screens himself from view. He will have nothing to fear on his right except the enemy's vessel, but I believe the vessels generally take up a position to the left.

"In sending boats into Escondido prepare for the bush attack on your right, which is a sandy beach overlooked by high rocks, pierced by several caves; one of which is large, and now occupied by fishers. This harbour is more spacious than Yatena. I recommend the boats of the attacking party, to keep to the right after passing the caves; as the enemy's vessel may be concealed from view, it would be doubtful on which side she lay, but the boats will have an advantage by keeping on the starboard shore, for should she be on that side, you only expose your boats to one fire before you board. I think there is little danger to be apprehended from the larboard shore, as the mangrove bushes are so very thick."

Having never had an opportunity of examining any of these "nests" although I have been along the shore in a boat; I cannot from personal observation confirm the correctness of these remarks. I may, however, state that the writer of them was an experienced and good officer. It seems obvious that he speaks of a day-light attack, in giving his advice as, during the darkness of night, the objects he points out as guides could not be seen.

I am of opinion that attacks on privateers, during a war, or on pirates, who may harbour in these snug retreats, should be made in the day; for, independent of being then enabled to see the dangers which lie in the way, the risk of losing valuable lives from the fire of the concealed force, among the rocks and bushes, whilst entering, would be less than during a night assault, if proper caution be observed.

In the night enterprise of the boats of H.M.S. *Desiree* against the notorious Captain Love's heavy armed schooner, in Escondido, the whole of the boats ran upon a shoal, and were there exposed not only to an ambuscade galling fire from *both sides*, but to a cannonade of grape from the vessel, which was moored broadside on to the entrance.

All their efforts to force the boats over, proved unavailing, except in the instance of one of the cutters, and she was brought up again by a hawser, which the clever rogues had stretched across from side to side. The men jumped out, and tried to lift the boats over, but the little they advanced, the less water was found; the whole time, whilst thus la-

bouring, the shots from the cross-fire were flying about like a hail-shower.

I leave the reader to fancy the state of feelings of this gallant but unfortunate body of men during the two or three hours they were thus entrapped—the result, from irritated passion, had they once got to the object of their search would have been dreadful! Love said:—"Let me rejoice that the ocean there was tideless, for, *once over* the, to me, lucky spit, there would have been an unsparing slaughter that night, and I had lost my craft to your desire!" Fortune, (the slippery jade), did not "favour the brave" upon this occasion, the boats were obliged to retreat, with the loss of one man killed, and an officer and several seamen wounded.

"Experience teaches." The best plan, therefore, seems to be to land the marines, for the purpose of routing the "Bush Rangers," or "Rock-Doves," whilst the boats push on without delay to attack the vessel; and this at daybreak.

Night attacks in such intricate places, I am of opinion will always fail, from the same cause which prevented the frigate's boats from being successful, unless every officer happens to be a good pilot for the locality, and even then we all know how difficult it is to thread our way in the dark through coral patches. Besides, it is the *genius* of the British tar to prefer a broad daylight encounter, even with the odds against him, when he can see and face his enemy, and *dash* at him with one of those soul-stirring, nerve-strengthening, reg'lar John Bull *huzzas*, by way of preface! "I hate," so says he, "your cautious, sneaking feline sort of groping in the dark after your prey,—coiling your ideas and courage into the compass of a nut-shell." "No! if I am to fight, (so he would say,) let me have the warm sun as a companion, and if I am to die in the strife, still let me be cheered by his glorious rays, as my spirit departs for the "unknown shore." I am fully aware, however, that under certain circumstances, the practice of night cutting-out must be adopted, as in the cases of vessels lying under the protection of strong fortifications, which it would be imprudent for the boats to venture near, except under the cover of darkness. But in the harbours where the affairs we particularly allude to occurred, there are no forts; in fact no protection for the enemy's vessels, but in their own guns, and what was afforded by the intricate nature of the approach; and which, indeed, as has been shown, served them almost as effectually as stone walls, and their garnishings could have done.

(To be continued.)

Expedition Chronometrique, *executée par ordre de sa Majesté L'Empereur Nicolas 1'er entre Poulkova et Altona, pour la détermination de la longitude geographique relative de l'observatoire central de Russie.*

At the present moment when a similar enterprize to the above is going forward under the direction of the Astronomer Royal, being the determination of the meridian distance between Valentia and Greenwich,

by a multitnde of chronometers, the details of such proceedings derive additional interest, and have, therefore, additional claims to our attention. The work before us consists of reports made to the Imperial Academy of Sciences at St. Petersburgh, by the celebrated astronomer M. F. G. W. Struve, the director of the central observatory of Russia.

The subject is systematically treated under its different branches, and as some historical detail is given in the commencement of it by M. Struve of the different expeditions of the kind, by which the present one has been preceded, a translation of it cannot fail to be of use. We shall therefore follow M. Struve in these particulars, and conclude our notice with the result of the whole operation in which we find 86 chronometers originally employed, contributed by different establishments as well as different makers, among the latter of which, we find those of our own countrymen, Mr. Dent, and Mr. Muston, of London. Of these 86, 68 held out to the end, which placed the observatory of Poulkova, 2h. 1m. 19s·09. east of Greenwich, depending however on Altona being 0h. 39m. 46s·57. east of Greenwich. The extraordinary coincidence of results obtained by some of these chronometers, far surpasses our anticipations, and cannot fail to be highly interesting.

We perceive besides the expedition to Valentia to which we have alluded, the present season will also boast of another between Altona and Greenwich, by order of his Imperial Majesty the Emperor of Russia.

M. Struve says,—'For twenty years or so, the employment of chronometers has become considerable in the critical determination of the difference of longitude between the observations of Europe and places important in geography. The progressive improvement of horology, the general taste for the exact sciences, and above all the facility of intercourse have mainly contributed to this.

The celebrated Danish astronomer Schumacher has gained great merit in this branch of geographical astronomy. In 1821 having given the first example of a chronometric determination of two points tolerably distant from each other (Hamburgh and Copenhagen) within a second of time, he has followed it up with a series of similar observations, attended with results even more exact. But steam has greatly favoured the use of chronometers, by almost annihilating time and space even in navigation. Again where navigation terminates, railroads affording a swifter communication, for the last twenty years have assisted the application of chronometers to this purpose, with a success which could scarcely have been hoped for.

In order to arrive at great exactness in chronometric measurements, a considerable number of these machines, and a repetition of the operations are necessary. It is this that has originated chronometer expeditions expressly intended for the determination of differences of longitude between important points. The first of the kind was executed by order of the British Admiralty, in 1824, when Dr. Tiarks, an astronomer, known by his important labours in America, for fixing the boundary line between England and the United States, employed a steam-boat of the government, and 28 chronometers.* To this number M.

* The expedition to Falmouth and Madeira.

Schumacher added 7 more, used in geodetical operations in Denmark. From the 3rd of June, to the 10th September, 1824, the vessel crossed the North Sea six times, between Greenwich, Altona, Helgoland, and Bremen. M. Hanson, of the observatory at Altona, was, on this occasion, placed at Helgoland, to observe time at that place. The calculations and the results of this expedition, were published by M. Schumacher in his journal No. 110 and 111 with reference to the Danish chronometers, and in No. 174 with reference to the English. The calculations were made after the method of M. Gauss, which occasion gave rise to a memoir in which he established the rules for the application of the law of probabilities to the problem of chronometric longitudes. It is this expedition on which rests the difference of longitude between Greenwich and Altona as 39m. 46s·57 a quantity correct to a fraction of a second of time as far as the accidental errors of carying time are concerned, but nevertheless subject to a slight uncertainty of constant origin to which M. Schumacher thus alludes (A.N. 110, p. 228.)

"I find again that the longitude may be influenced by two constant errors. First by the difference pointed out by M. Bessel in the determination of time by many observers. This difference equals 0s·17 by me and M. Hansen who observed the time at Helgoland, he being later than me. But the difference between us and the observers at Greenwich is still unknown to me. Secondly by a difference in the reduction of the observations. As soon as I obtain the Greenwich observations for 1824 I shall calculate the same stars for the times at the two places, and will publish the corrections which may result from this source."

This publication has not appeared.

A second chronometric expedition took place in 1833 by order of his Majesty the Emperor, under the direction of Lieut. General Schubert, with the object of determining the longitudes of places important to navigation on the shores of the Baltic. The Prussian, Danish, and Swedish Governments, assisted in forwarding the common object.

Permanent observatories were fixed at Helsingfors, Kooninsberg, Dantzic, Pillau, Stockholm, and Copenhagen, and at other selected points temporary observatories were established, and provided with instruments for the exact determination of time; these were at Kronstadt, Reval, Abo, and on the islands of Hochland, Oesel, Dazen on the part of the Russian Government,—in the islands of Gothland and Oeland on the part of the Swedish Government, and on that of the Danish Government on the island of Christians, Oe, and at Lubeck. The Hercules, a Russian steam-vessel of war, made three trips round the Baltic touching as quickly as possible at the above places. The expedition terminated on the 18th September with the third return to Kronstadt, after having been employed 115 days from the 26th of May. The whole number of chronometers embarked in the Hercules was 56, of which 32 were box and 24 pocket,—36 of them belonged to the Russian Admiralty, 8 to the Ordnance Map Department, two to the Observatory of Dorpat, four to that of Altona, and six were private property. M. Schubert has given an account of this expedition with all the calculations belonging to it in the Memoires of the Depôt Hydrographique, in vols. 3 and 4, in the latter of which p. 173, will be

found the table of longitudes of the above mentioned places as well as others connected with them by the geodetical operations of the different countries.

M. Struve continues,—"I should be led far from my present purpose if I were to trace out the complete account of chronometric expeditions of the present day, among which the most remarkable are those between Altona and Berlin, by M. Schumacher, the journeys of Mr. Dent between Greenwich and Paris, and other observatories of the British islands, the connection of Brussels with Greenwich by Mr. Sheepshanks and Quetelet. Mr. Dent has even ventured to send his chronometers in a steam-vessel across the Atlantic, and to fix the longitude of New York. But the two expeditions of which I have given some details above are directly connected with that which is the subject of this report, and which had for its object, the fixing of the central observatory of Russia, an important object as the Observatory of Poulkova must be considered as the fundamental point of the geography of the Russian Empire."

Liverpool, July 31st, 1844.

African Guano.—Sir.—Seeing in your valuable publication various communications from a Mr. Livingstone of Liverpool, labouring to draw the attention of shipowners to him, as the main instrument in fixing the attention of commercial speculators on African guano, and having first introduced it into this kingdom, I feel satisfied you will not look upon me as presumptuous if I put you right on this subject.

The agricultural and commercial public are like myself naturally anxious to be made acquainted with the originators of this traffic, and so deeply have I participated in this feeling of grateful curiosity, and as a shipowner having reaped some considerable benefit from it, that I have been at some pains in instituting inquiries on the subject, and can now confidently inform you that the first cargo of guano imported from Africa was by the brig Ann of Bristol, Captain Farr, chartered by Mr. Norman McLeod of Liverpool, on joint account with Mr. James Rae; and that the information on which they relied was derived from the perusal of Captain Morrell's "Voyages to South and Western Africa," which have been for many years in the hands of the public.

It is well known too, that while this vessel was performing her voyage, the adventure was ridiculed and laughed at by many who have since profited by the trade. These facts considered, it amuses me to see Livingstone intruding himself on public notice, and with more urgency than gentlemanly taste, soliciting some token of public favour in your valuable columns, and newspapers; while all he has done in the matter, was an accidental stumble on and perusal of the Voyages in question.

Captain Farr who commanded the Ann has been endeavouring to present himself as a voyager and a discoverer of a place he was bound to go to under special charter, and of which he had no knowledge until he opened his sealed instructions at sea. "Show me the door," said the Patlander, "and I will find out the house," and this comprises the amount of enterprise and discovery, manifested by Captain Farr in the matter.

Nor can I see that there is any merit due to the parties whose private interests induced them for the sake of similar profits to test the authenticity of Morrel's voyages. Still if any of the claimants now before the public, deserve acknowledgment at the hands of the British merchant and agriculturist, they are the Liver-

pool party whose enterprise, in the face of many discouraging probabilities, led them to pave the way, and first import an article that had undoubtedly formed an epoch in the annals of British agriculture and commerce.

I am Sir, &c.,

JAMES THOMPSON.

To the Editor, &c.

THE PAMPERO OF THE 10TH OF MAY.

THE information we have collected relative to the extraordinary gales of wind experienced at Montevideo, tells us that; on the 15th of June 1819 the Spanish frigate *Loreto* was lost on the point of the fort San José, in a hurricane in which sixty vessels large and small were cast ashore. The 15th of October 1824, hail fell of an enormous size, a rare occurrence in this country, although we have seen it happen on the 20th of January this year; on both occasions the storm was followed by a gale from the S.W. excessively violent but of short duration.

The 28th of September 1826 a very strong pampero caused damage to nearly a hundred vessels at anchor in the port and occasioned the loss of a great number. In 1837 the same accidents were renewed.

In these latter years the only gale of wind at all to be compared to that of the 10th of May was the south-easter of the 17th and 18th of January 1842. The tempest lasted two days and a half, and the water rose so high as to cover the raised ground leading to the Mole, and to demolish a house that was being built near the Commercial rooms at the east angle of the quay. But owing to the port being sheltered from the wind and the current by the situation of the town, only two schooners and a few boats were driven ashore. At Buenos Ayres it happened quite otherwise and a number of vessels suffered serious damages. In the course of last year two similar gales from the S.E. spared Montevideo and caused enormous injury at Buenos Ayres. On the 31st of May, whilst we had here only a few boats lost, at Buenos Ayres fourteen vessels went ashore. On the 8th of October the water rose over the Alameda and threw down houses at two or three hundred yards distance from the beach; a frightful south-easterly wind driving the water before it carried the vessels into the gardens of the vicinity; several ships suffered extensive damages.

The Pampero of the 10th of May will remain in the recollection of the population as an evil day. The violence of the wind and the irresistable impulse given to the waves are sights not to be forgotten, especially when the thought is added of the disasters caused by this strife of the elements; disasters which would have been still more direful had the port enclosed, as at other times, several hundred ships. Instead of eight having stranded we should have seen forty, and the losses would have been immense.

The gale did not come on suddenly. For some days the weather had been unsettled and the barometer of which the mean height is 763 millimetres (about 30·04) stood at 759 (about 29·88). It was between 9 and 10 o'clock in the forenoon that after a drizzling rain followed by a calm, the wind shifted to S. W. and increased during the day but with every appearance of a mere customary *pampero*. During the night between the 9th and 10th the violence of the wind increased, especially about 2 o'clock in the morning; when the waters accumulated in the bay began to swell in such a manner as to give cause for alarm, boats began to be torn from the ships and to be carried to the beach; the battery of *Colonel Ramallo*, commanded by our countryman M. Barrere, was

covered and partly swept away. The men which guarded it held their posts till the last moment and saved all the munitions, but their last trip for this purpose was attended with great danger to such a height had the water risen. At 8 o'clock in the morning the barometer which was still at 757 millimetres fell in two hours to 753 (about 29·64). This was also the fiercest moment of the tempest; an armed schooner and launch of the national flotilla, the hull of the *Courrier de St. Malo,* the American brig *Susan,* went one after the other to the beach to join other vessels that were there already. The steamer *Ardent* dragged at her anchors and boarded the *Du Petit Thouars* who lost her bowsprit. At the same time another English steamer of 320 horse-power the *Gorgon,* had drifted some cables lengths and steamed to hold her own, in fact about 11 o'clock, notwithstanding the wind and current, she gained about a mile and anchored near the middle of the bay with two anchors. The current then became so violent that both her cables parted, and all the strength of her machinery was insufficient to maintain the ship upon her last anchor; these two means of resistance only served to prevent her being violently driven on shore, and she struck gently about 5 o'clock in the afternoon.* At the same moment the wreck of the brazilian brig *Asilo de la Virtud* disappeared at the point of San José, where she had struck at 3 o'clock, and her crew had been saved only with the greatest difficulty, and by the succour rendered by a few brave sailors who went to their assistance.

In the outer roads the frigate *L'Africaine* dragged several cables' lengths, *L'Atalante* anchored in the strength of the current had her head carried away and a boat from the stern davits, and shipped tremendous seas. The Argentine brig Belgrano almost disappeared, and was obliged to keep her topmasts standing in case of having to get under way not to founder at her anchors.

On shore the aspect of things was no less deplorable. A part of the jetty belonging to M. Donnel was injured, several walls near the point of San José thrown down, the whole of the quay undermined by a peces of wreck. The

* We have ourselves been at some pains to obtain an exact account of the disaster of H.M.S. steam frigate *Gorgon,* and our readers may rely implicitly on the correctness of the following particulars.

It appears that for a great length of time the *Gorgon* rode safely at her customary anchorage, but in consequence of an unusual quantity of water having been blown into the bay, the ebb tide made with great violence, and acting on her stern caused her to lie broadside to the sea and wind. The ship immediately commenced driving, and every effort was made, by using steam and sails, to bring her head to the wind, but the tide was too strong, and she continued drawing in towards the shore. 'Ere long one cable parted, and being then near the rocks off the fort of San Jose, she slipped the remaining cable, and endeavoured to proceed to the outer roads; but the wind being too violent and Captain Hotham finding she would not weather the point of the "Mount," anchored the Gorgon as he thought it in a secure situation. Here she remained riding easily for two hours, when suddenly the last cable broke, and the ship being completely embayed and without anchors or cables, and unable to get out to sea soon drove ashore. Among nautical men the opinion appears to be that her cables were not of sufficient dimensions. We rejoice to here that the Gorgon has sustained no injury; and that all on board confidently hope soon to be again on their proper element.—*Edit. Britannia.*

A letter which we have received from a naval officer on this subject says—"After parting one cable and slipping the other, *which was coming home,* being close to the rocks they tried to steam off but could never get her head to the sea. The consequence was she merely went across the bay till they brought her up near Rat island, with their last anchor which was one of Rodger's and which held beautifully. But the *cable* (chain) *soon parted,* and with all the power of her engines working very well, and with a main try-sail on her they could not keep her to the sea, and she went on shore broadside on, in the bottom of the bay." The foregoing is another practical proof of those excellent holding qualities of Rodger's Anchor which we have so often advocated.—Ed. N.M.

Mole itself only resisted by its great solidity, but the waves gave it furious shocks which shook it to its very base.

Amid this horrible confusion the *Cubo del Norte* was still worse treated. An immense quantity of timber was carried away to the head of the bay. The *Barraca del Mar* was partly demolished and an enormous heap of coals precipitated into the sea. Several wooden houses were suspended from their foundations, floated in the current, and were heaped pell-mell with the other wrecks that covered the beach.

The wind which had somewhat diminished at two o'clock came on again at three in all its violence; the night of the 10th was as terrible as the preceding one. The sea completed the demolition of all that was opposed to it. A fall of rain then changed the aspect of the sky, but it was not till the morning of the 11th that the wind which had been at S. shifted to S.S.E. and slackened sensibly towards night; the evening was almost fine. The waters fell with the same rapidity that they had risen. At length, on Sunday the 12th, a dead calm and a low tide enabled us to appreciate the extent of the disasters caused by the hurricane.

We rejoice to be able to announce that none of the vessels that went ashore of the national flotilla have sustained serious damage; all three may be soon restored. The steamer *Gorgon* will require a great deal of labour to get afloat, for her machinery will have to be taken out, but it is after all only a question of time and hands.

It is affirmed that fourteen vessels, two of them ships of war, were stranded at the *Buceo*. This is not to be wondered at if we consider that the anchorage at the Buceo is on a bottom of sand, much less favourable than that of the of Montevideo.

We have not yet any positive intelligence as to the disasters which may have happened to the vessels anchored at Colonia, or at Maldonado or in the open river during these terrible forty eight hours.—*Britannia, May* 18.

The Talbot Reef.—*G. Taranto.*

Sir.—In the *Nautical Magazine* for August, a statement is made by Mr. R. W. Newbery, of the loss of the brig Talbot, which he commanded, on a reef off Cape St. Maria di Leuca, and which he attributes to the inaccuracy of the chart, which was drawn by me, and the Directions, by the late Mr. John Purdy, which accompanies it. Now on referring to the chart, which is a general chart on the scale of two inches to a degree, the dangers off the coast are distinctly marked,* and at page 169 of the Directory it states thus, "The coast between C. Sta. Maria di Leuca and Gallipoli forms a convex line, facing the south-west, and there are several shoals about; more particularly a long flat of two leagues in breadth, stretching from shore, having on its outer edge 20 fathoms, and only 4 at two miles from shore. Near the southern edge are two sunken rocks (Cavallo and Giumenta,) nearly three miles from shore, at 11 miles westward, of Cape Leuca. These must of course be carefully avoided; and in the section on the tides and currents, p. 9, also in p. 282, there are ample directions given on those points.

The Cadiz light is also correctly given on the chart as one revolving light; the interval of the obscuration is only 2 seconds in every minute; this short eclipse

* We have seen no chart distinctly shewing the reefs on which the Talbot was lost, nor do we see how a chart shewing 60 miles in the small space of two inches, can represent them.—Ed. N.M.

is perhaps not total within a short distance, and this may have given rise to your correspondent's mistake.*

The light on St. Andrea island has been on all charts for many years; I am not aware how it originated, and the light of Taranto being merely a fishing light, of course no public notice has appeared concerning it.

The light on Cape St. Vincent, on the coast of Portugal, was inserted on the authority of a notice which appeared in January, 1842,† and which stated it to be nearly ready; the same holds good also with regard to a light on Cape St. Maria, to the eastward, not mentioned by your correspondent. I have since learned that these, like other Lusitanian‡ improvements, are still in perspective, and for some time they have been expunged from the chart. With respect to the light-house being now building, I have been assured that a few weeks since, there were no signs of any erection of the kind on Cape St. Vincent.

I am, Sir, yours &c.

To the Editor, &c., A. G. Findlay.

The Royal Western Yacht Squadron of England.

The *Nautical Magazine* of last month, contains at page 520 a list of the "Royal Yacht Squadron," whose head quarters are at Cowes, where the members have a club-house and battery. The "Royal Western Yacht Squadron" possess also a battery and a club house, open all the year round, and their head-quarters are at Plymouth. The Cowes vessels wear the white ensign of the Royal Navy, and the Plymouth vessels the blue ensign; each club having this privilege under Admiralty warrant. The Plymouth club-house is situate in Mill-bay, commanding a fine view of the Sound, and a signalman is constantly on duty, ready to communicate with the vessels of the club. The Western Members number nearly four hundred, and their yachts now in commission, are above sixty. Among them are the Menai 176 tons, Fairy 143 tons, Camilla, 147 tons, Nautilus 103 tons; Jannette 141 tons; Louisa 163 tons; and other well-known craft of size and power. The following list is corrected up to the end of August, (1844,) and we know that several yachts are about to be added to this aquatic fraternity.

Commodore—The Right Hon. the Earl of Morley.

Vice-Commodore—Capt. Bulkeley.

Rear-Commodore—J. Delafield, Esq.

Resident Secretary—(Plymouth,) Walter Lomer, Esq., R.N.

Solicitor at Plymouth—Coplestone L. Radcliffe, Esq.

Standing Counsel—William Knight, Esq., Western Circuit, and 9, Inner Temple Lane, London.

Vessels	Tons.	Owners.
Ariel	s. 39	S. W. Handy, Esq.
Camilla	s. 147	T. Halifax, Jun. Esq
Fairy	s. 143	W. Peareth, Esq.
Griffin	s. 17	G. Freeth, Esq.
Janette	s. 141	Earl of Egremont
Liz	s. 11	W. Stovin, Esq.
Menai	s. 176	W. Faber, Esq.
Peri	s. 59	Capt. Bulkeley
Titania	s. 29	G. Leith, Esq.
Gulnare	l. 31	J. Chandless, Esq.
Lady Frances	l. 28	J. C. M. Poore, Esq.
Nora	l. 26	C. B. Blaydes, Esq.
Fleta	yl. 13	H. G. Hopkins, Esq.
Louisa	yl 163	J. C. Sicklemore, Esq
Nautilus	yl 103	S. Wardell, Esq.

* The master of the Talbot can best answer this.

† Nautical Magazine, 1842, page 8.

‡ Does Mr. Findlay mean "Portuguese?" If so, why not call them Portuguese, unless he wishes to do the grandiloquent. The light on Cape St. Vincent as he says was stated to be "nearly ready," which means we suppose *not finished.*—Ed.

The following yachts of the R. W. Y. Club are all cutter-rigged,

Vessels.	Tons.	Owners.
Anne	42	Hon. W. H. Hare
Arab	44	T. Slade, Esq.
Champagne	17	S. D. Olliver, Esq.
Clymene	22	Hon. O. G. Lambert
Crafty	10	W. Hooper, Esq.
Elizabeth	35	W. Wright, Esq.
Falcon	60	J. Beardmore, Esq.
Fanny	15	Capt. Shawe
Ganymede	70	J. H. W. Pigott, Esq.
Gem	19	G. Freeth, Esq.
Grand Turk*	15	T. W. Fox, Esq.
Giulia	42	J. Kelson, Esq.
Iris	15	E. J. Armstrong, Esq.
Julia	22	Hon. Capt. Hare
Leveret	35	J. Hare, Esq.
Lily of Devon	30	F. W. Moore, Esq.
Lotus	18	E. T. Janverin, Esq.
Maid of the Mist,	31	H. Studdy, Esq.
Mary	19	W. Varnham, Esq.
Medina	44	A. J. Hambrough, Esq.
Mermaid	56	T. Gardnor, Esq.
Midge	14	J. W. Peard, Esq.
Nesta	12	L. C. Gwyn, Esq.
Nettle	57	Capt. Douglas
Olivia	25	W. Potts, Esq.
Osprey (a)	59	J. Petre, Esq.
Osprey (b)	52	T. N. Allen, Esq.
Paul Pry	23	Hon. P. Plunket
Phantom	10	J. Knight, Esq.
Sapphire	70	Sir C. H. Ibbottson
Sea Nymph	10	C. Wheeler, Esq.
Sibyl	28	J. R. Carnac, Esq.
St. Margaret	30	S. R. Delme, Esq.
Sultan	30	F. W. Fox, Esq.
Sultana	49	R. Wake, Esq.
Sylph	17	W. Bush, Esq.
Tartar	30	W. H. Dawes, Esq.
Turk	44	J. Hare, Esq.
Wave	10	E. B. Tweedy, Esq.
Weazle	25	T. Pope, Esq.
Whim	49	C. Brett, Esq.
Will o' the Wisp	44	Capt. H. Williams
Young Queen	13	Capt. Whitbread
Zephyr	56	A. E. Bowen, Esq.

* It is said that Mr. Hyde, has just bought the Grand Turk, and entered her on the list of the Royal Thames Yacht Club.

The Mersey Yacht Club.

The object of this Society is to establish on the river Mersey a Yacht Club, something similar to that on the Thames, for the purpose of promoting Yacht sailing and Yacht building.

All parties who are favourable to this object, and the Yacht owners in particular, are solicited to unite and promote the interest of the Club.

There are at present many fine Yachts on the river, sufficient to form the basis of a fleet, to contend for the prizes intended to be given by the Club.

It has been acknowledged in our Houses of Parliament that the Naval and Mercantile interests of this country are much indebted to the Yacht men of England, for the experiments they have made and the improvements they have effected, in the building, general construction, and management of their vessels, with a view to swift sailing; and so well aware are Government of this fact, that, with all the immediate opportunities within their reach, they have given, as a further means of promoting the Naval greatness of the Empire, the most fostering encouragement to the science of Yacht sailing.

The recreation itself is highly national, manly and healthful; and, moreover beneficial in keeping up the spirit of our youth who aspire to be defenders of our national honour on that element so especially subject to our enterprise.

The laws and regulations of the Royal Thames Yacht Club have been adopted, with some revisions suitable to our locality.

The Club will hold a monthly meeting throughout the year, at a place appointed for the purpose, the first Tuesday in each month, to elect Members, transact the business of the Society, and discuss matters connected with nautical affairs only; and any member may introduce a friend at such meeting.

Each person will be ballotted for, and on payment of one Guinea entrance fee and one Guinea subscription, become a member, and have a vote in the proceedings of the Club.

The Subscriptions to be paid Annually, in advance, on the first Tuesday in March in each year, to commence in 1845.

The funds of the Club will be raised by the Annual Subscription of One Guinea each; and a Member cannot be called upon for any amount above his subscription.

The funds of the Club, (after paying the necessary and current expenses,) to be appropriated to the purchase of Cups or other Prizes, to be sailed for by Yachts belonging to Members.

One or more Sailing Matches to take place during each season.

An Open race, or Challenge Cup, for Yachts of a tonnage exceeding that limited for the Club Matches, will be open to vessels of any Royal Yacht Club, as the funds may admit.

The Officers of the Club will be honorary, elected annually, and will consist of Commodore, Captain, Treasurer, Cup-bearer, two Auditors, and Secretary.

On the day of any Sailing Match a steam boat will be engaged for the Officers, who will superintend and regulate the races, and all members will be admitted on board by ticket, and allowed the privilege of introducing a limited number of friends.

By order of the Club,

Mersey Hotel, Yacht Club House,
Liverpool, July, 1844.

Henry Melling,
Hon. Secretary.

Communications addressed to the Hon. Secretary, 16, Kent Square, will meet with due attention.

The first preliminary meeting of this club, took place on the 26th of July last, with a numerous and respectable attendance of gentlemen, when the officers of the club were appointed. The monthly meeting for August was held, on Tuesday the 6th instant, at the Mersey Hotel, Club-room, Liverpool.

The officers took their respective seats. The Commodore, as Chairman, and the Captain as Vice-Chairman. The business of the evening commencing with the Hon. Secretary reading over the minutes of the preceeding meeting, which were confirmed. The gentlemen who were appointed on the sub-committee, to revise the laws prior to their final adoption, then brought forward their report. The code of laws thus revised, was passed; they appeared to be peculiarly adapted for the good organization of a Yacht Club, and the regulations suited to the locality of the Mersey. The business of the evening terminated by the nomination of a number of gentlemen, who are to be ballotted for as members at the first meeting in September. The Secretary announced that the club already had between thirty and forty names on the list as members. The meeting passed off with the same cordiality and spirit which characterised the first meeting; and there is every prospect of the club becoming numerous and prosperous.

Aquatic Events for September.

Sept. 2.—Gravesend Regatta.
9.—The Arundel Club sailing match in the Thames, between Woolwich and Greenwich, for the silver cup given by Mr. T. Hewes.
16.—Margate Regatta open to all boats on the coast of Kent.
16 and 17.—The Lancaster Regatta.
18.—The Eastern Coast Regatta at Harwich.

Yacht Club Sailing Matches in August.

Early in August, the Corsair, cutter-yacht, 84 tons, John Congreve, Esq., owner, beat the Ariadne, cutter, of 84 tons, belonging to Capt. Ponsonby, in a race round the Isle of Wight. Both vessels are on the list of the Royal Yacht Squadron, of which the Earl of Yarborough is the Commodore.

On Tuesday, the 13th of August, six schooner-yachts sailed over the same course; the Fairy 143 tons, Georgian 173, Zephyretta 180, Xarifa 185, Galatea 190, and Brilliant of 393 ton; the Brilliant has three masts. Zephyretta lost her jib-boom, Galatea, her foremast, and the Georgian, William Lyon, Esq., owner, won the cup. The whole of these schooners belong to the Cowes club of which we gave a list at p. 520 in the last number of the *Nautical.*

On the 14th of August, the cutters Blue Bell 25 tons, Champion 25, Gazelle 25, Gnome 25, Gulnare 24, Mystery 25, and Phantom 20 tons, all belonging to the Royal Thames Yacht Club, raced inside the Isle of Wight, for a cup, which was won by the Mystery, Viscount Seaham.

On the 15th of August, the cutters Champion 25 tons, Phantom 25, and Elizabeth 35 tons, raced in Southampton water, when the Champion, H. Gunston, Esq., won the cup.

On the same day, the Blue Bell 25 tons, Sibyl 28, and Mystery 25 tons, tried their respective powers, when the Blue Bell, T. Hodges, Esq., came in first.

On the 16th of August, the Sibyl 28 tons, had two fresh competitors in the Phantom 20 tons, and Gnome 25 tons. This race also came off in Southampton river and the Sibyl won. In this contest the Gnome lost her bowsprit.

The Plymouth Regatta is an annual aquatic re-union which has been regularly and in a most spirited manner supported since the year 1827. The *Nautical* of last month announced that it would be held on the birthday of H.R.H. Prince Albert, August 26th, and following days, at which besides most of the vessels of the R.W.Y. club given above in our alphabetical list, the Ida, Ferret, Girl, Red Rover, and other craft belonging to Plymouth were present, as well as numerous yachts, whose owners are members of the several clubs mentioned in page 520 of the *Nautical Magazine.*

Aquatic Events in August.

It would be impossible to notice in the *Nautical Magazine* all the *rowing* matches which occur within our ken at the present season of the year; and the same remark will apply to numerous contests under canvas. But there is one match in the Thames, which, occurring annually, has taken place since our last number, and this we now propose briefly to record.

Doggett's Coat and Badge.

Each succeeding first of August, brings with it this old established and interesting boat race, on which the very popular musical farce of the "Waterman" is founded. The prize is a coat and badge, bequeathed by Mr. T. Doggett, a famous comedian, in commemoration of the happy accession of the family of Her Majesty to the throne of Great Britain, to which has been added by the will of Sir W. Jolliffe the interest on £200 South Sea Stock, amounting on the present occasion to £4 7s. 6d. for the second man, and £2 12s. 6d. for the third. The competitors, as usual, were young watermen, whose terms of apprenticeship had expired since the last year's race. The distance has been from time immemorial from the Swan at London bridge to the Swan at Chelsea, five miles against tide—far enough, it will be admitted, to try the prowess of any man.

The start took place about half-past 4 o'clock, the competitors being, F. Lett, Lambeth; W. Wingate, Battersea; J. T. Sibrey, Christchurch; W. Tomson, Hungerford; T. Savage, Alderman Stairs; F. W. Jones, Whitehall. Lett, who is four or five and twenty years of age, has signalized himself as a young man of very considerable pretensions, and was backed to win this race at 2 to 1 against the field. The men being in readines at high-water were started in the slack, and all got away very prettily together. They were all scull and scull for a few yards, and then Sibrey led, Wingate being second, and Tomson and Lett abreast of each other, and the other pair keeping good company, about a yard astern. The work was very pretty, and Lett was about to mend his position on nearing Southwark-bridge, when, in consequence of the wash of a steam boat, and a barge coming down in the course he was rowing, he was obliged to unship one of his sculls, and became last. The other five were but a few yards apart, Wingate leading, Sibrey being second, Tomson third, and Savage almost level with him. Lett having got comfortably to his work again, rowed in the most beautiful style, and after passing four of his opponents, came

up to the leading man near Blackfriars bridge. The struggle lasted but for a few yards, when Lett went in advance, and drew away from his opponents without giving them a chance, and arriving first at the distance post, full a quarter-of-a-mile a-head of the whole party. Wingate and Sibrey retained the position they had been in, and although all the men rowed with great spirit, and made their appearance at Chelsea, save Jones, who soon resigned after the start, the winner was too fast for them, and had it all his own way.

The Yacht Wanderer.—The *Australian Journal* of April 4, states that the beautiful pleasure yacht the Wanderer, arrived on the preceding day from Two-fold Bay, after a run of 24 hours, during which she experienced heavy winds, being under close-reefed top-sails. She is apparently in fine sailing trim, and her owner, Benjamin Boyd, Esq., has her partially manned by the natives of Boyd Town district, of whom King Toby, of Mullica, is the head.

Voyage of H.M.S. Cornwallis.

Canto the Ninth.

From Chusan to Hong-Kong, touching at Amoy.—Return of the Treaty ratified by Her Majesty.

Cornwallis's cruising now comes to a close,
As far as her fun with the Chinamen goes.
I began at Hong-Kong, so at Hong-Kong I'll finish,
With a hope that "your shadow may never diminish."
At Chusan we finished our Christmas dinner,
And there seemed little chance of our getting much thinner;
The market so full of good things was supplied,
We could not have been short of grub if we'd tried:
The weather was lovely, the air cold and clear,
We left it with sorrow though not with a tear.
The Admiral had plenty to do night and day,
In paying off transports, and sending away
The troops (white and black) which in numbers were sent
To India; delighted they were when they went!
Several ships had arrived since we lay here before,
For some months the Thalia had been "Commodore,"
With the Hospital Minden, and a new brig or two,
Which arrived rather late to have much work to do.
Intending to visit Foo-choo on the way,
We started at last on the thirtieth day
Of a cold January morn, and passed Ty-woo-shan,
Through a new channel, bidding adieu to Chusan.
Two days took us down to the mouth of the Min,
And we took refuge under the lee of Pe-Kuin.
Or, "White Dog Isles:" terribly barren and wild,
Twenty miles from the river—the weather not mild;
After waiting two days we sent a boat in
To see if the Phlegethon was in the Min;
And found this fine steamer hauled up on the shore,
Having knocked a great hole in her bottom before
We arrived; so the trip to Foo-choo as intended
Was put off, the hole taking some days to get mended.

We then went on our way, but the wind was so strong,
And the current,— we nearly ran down to Hong-Kong.
Instead of a quiet sail in the next morning
We had to beat back—so ye seamen take warning!
Arrived at Amoy—in the beautiful bay
Just outside the harbour, the Cambrian lay
With Wanderer, Pelican, Serpent.—Inside
Off the town the large junks, in great number ride.
The hills of Amoy are large masses of rock
Tumbled one above t'other as if some great shock
Had suddenly capsized the whole of the island,
Torn great stones from the sea, and pitched them on dry land.
The long granite battery of course we inspected,
Now tumbled to pieces and all quite neglected.
'Twas of this place friend "Punch," in fun always revelling,
Said "Sir Willlam had shewn his ideas to be levelling."
Kolong-seu, a small island not far from the fort,
Which flanks the long battery, forms a safe port;
It is covered with rocks, and large trees evergreen
With their roots twining round them in numbers are seen.
Some beautiful neat little spots here and there,
Where rich Chinese merchants once came for sea air,
Are now officers' quarters; they seemed quite to my eye,
Like the houses and gardens one sees at Pompeii.
Sir William inspected the Cambrian's lads,
Who in gunnery greatly excelled under Chads;
Colonel Cooper commanding the isle Kolong-seu,
To honor the Admiral had a review
Of the whole of the troops. After which the "hounds met,"
And I cannot describe what a curious set
Shewed off—such descriptions not being my *forte*,
But here's one of my shipmate's account of the sport.

The Hunt at Kolongseu.

Come round me all you sporting blades, come listen now to me,
Whilst I relate with grief and shame, what's called a glorious spree.
An isle there is, some three miles round, near China's rocky coast,
Is garrisoned by Briton's bold— as our brave land can boast.
Bold though they be in fight or fray, (what Englishmen are not?)
I think I'm right when this I say—to sporting they're a blot.
Sons of the chace! pray just conceive—a little bow-legged hound,
And an *imaginary* dog—a pup, who soon threw off and found.
What did they find? A wretched cur—just well enough to crawl,
Whose Chinese master late had lost—his house, his land, his all.
Such were the *hounds*, and such the *game*, the *field* now let us view,
Ten men I think were all that came—arrayed in red and blue;
One on a jack-ass trotted on, the others ponies straddled,
Some lame, one blind, in fact such brutes, never before were saddled.
Didst ever see a chimney sweep, on rump of donkey seated,
Flourish his brush, and with a grin, canter till he got heated?
If so, then picture to your mind, a dozen washed and shaved,
In red and blue, instead of black, and just as well behaved.
Foremost came on a sailor bold—in scarlet coat attired,
And all who saw him as he rode, his white-topp'd boots admired.
He had no breeches on, but as he looked round for applause,
No one would guess that such a swell was riding in his drawers.
Yet in his own conceit each man, a pack of hounds was following,
And when the cur was tir'd and flagg'd, commenced his senseless hollowing
The end I now with pain unfold, which called forth many a blush!
The dog escaped—a cat was killed—the "huntsman" took her brush!
Should any Nimrod read this lay, and doubt its being true,
Ask any one who saw, I pray,—"The Hunt at Kolong-seu."

The north-east monsoon which still blew us along,
Took us down in two days to the bay of Hong-Kong;
With the Pelican following, so here end our labours,
We now "take it easy," as well as our neighbours.
The Agincourt's here—Admiral Cochrane (Sir Thomas)
Who we fancied at first, was to take the ship from us;
The transports and troop ships are all spread abroad
Sir Hugh gone to Calcutta, to talk to "My Lord."
We had been here three weeks in a most anxious state,
For the packet from home, we knew would not be late;
The Vixen at last steamed in one fine night,
On the sixteenth of March, with (the moon shining bright,)
Colonel Malcolm, the Treaty; and more to *our* notions,
A list quite as long as my arm of promotions,
Which delighted all hands, though I wish from my heart,
That Sir William (as well as Sir Hugh) was a Bart.
It was pleasant to find with what glee the whole nation,
Heard the news of the treaty—no consideration
Of money, or Empire, in their feelings were blended,
There was only one cry—"Thank God, the war's ended."
Old England will always be very well off,
If her fleets have a Parker—her armies a Gough.
And experience has proved that one straight forward man,
Is worth more than, of half and half humbugs, a clan.
To Pottinger then England's praises are due,
And so, my dear friend, I now bid you adieu.

H.M.S. Cornwallis, Hong-Kong,
April 1st, 1843.

FINIS.

Wrecks of British Shipping.

Continued from p. 525,.—cs, crew saved; d. drowned.

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM.	TO.	WRECKED.	WHEN.
Active 206	Plymouth	May	———	———	off P. Talbot	Aug. 4, cs
Casteda	———	———	Quebec	London	Labrador	Autumn42
Crusader	———	Wheatley	Quebec	London	Labrador	Nov. 12,
Dominica	———	Salter	London	Jamaica	Aux Cayes	May 6, cs
Friends 210	Ilfracombe	Fry	———	———	Caernarvon	Aug. 3, cd
G. Ponsonby	———	Mc Kinnon	Arklow	Newcastle	off Colonsay	July 22, cs
Gleaner	London	———	Quebec	abandoned	45° N. 48′ W.	June 28, cs
Guernsey Lily	———	———	———	———	Ichabo	May 17, cs
Hannibal	Richbucto	Graham	New York	St. John N B	Nova Scotia	June 28, cs
Highlander 215	———	Blues	Archangel	Montrose	Annot Bank	Aug. 7, cs
Jean Hastie	———	———	Boston	St. John N B	Cranberry H	July 20
Judith	———	———	Bristol	Loando	8° N.	June 12, cs
Julia	———	How	Bridgwater	Dublin	Worms Head	Aug. 3, 1 d
Lady Walker	———	———	———	———	———	June
Margaret 220	———	Thomas	Rotterdam	Bristol	Holmes Sand	Aug. 3, cs
Mary	———	Banton	Chepstow	Swansea	Worms Head	Aug. 3,
Munster Lass	with guano	Carew	Ichaboe	Barbados	Coblers	June 8, cs
Prince Albert	Halifax	passed	abandoned	in	48° N. 38° W.	June 12
Racoon, barque	Exeter	———	———	———	46° N. 26° W.	June
Robert Napier 225	———	———	Londondery	Liverpool	by fire	July 24, cs
Seaflower	———	Florian	———	———	St. Paul's I.	June 14
Singapore	with deals	Simpson	———	———	Rye Coast	July 14, cs
Spence	———	Miller	Trinidad	Londonderry	off Malin Hd	July 21, cs
Triton	———	Wilcox	Plymouth	Swansea	Worms Head	Aug. 3, 3 d
Vixen 230	———	Hepinstall	———	———	C: Verde I.	January
Whim	Ipswich	Thomas	———	———	C. Cornwall	Aug. 3, cd

208—Three bodies found this spring on an island near Cape Wapitongani, where it is supposed every soul perished. The correspondent adds, "It is to be regretted that it is not generally known to masters of vessels who pass through the Strait of Belle Isle, that the coast is inhabited, and that this is the second time that crews of wrecks have perished from hunger and cold, when they might have been saved, if they had landed, and sought out the inhabitants. The Crusader was wrecked within three leagues of inhabitants either way who would have been received with open arms. The Indians are remarkably kind, and there is nothing to be apprehended from them." The foregoing, if true, is highly important and we are quite sure the attention of the Harbour-Master and Ballast-Office at Quebec need only be directed to it to secure it immediate attention. The case of Anticosti was similar, a few years ago, but there provision posts have been established, and their positions made known. The same ought to be done with the Strait of Belle Isle, and no merchant captain should navigate the St. Lawrence, without the positions of those places where refuge may be had in case of wreck, being marked on his chart. We trust the authorities will see to this very important matter.—Ed. N.M.

212—Crew taken off by the "Try Again" Heacock of Cork.

217—During a gale struck by lightning, sprung a leak and abandoned.

221—Seen waterlogged on Bank of Newfoundland.

224—Found abandoned by the Isabella in 46° N. 26° W.

225—Took fire between Port Rush and Bally Castle, and burnt from quarter deck aft: run on shore at Bally Castle; engine, boilers, and cargo saved, no lives lost.

230—The chief mate and one of her passengers came home in the schooner Patalina from the Gambia, arrived in the St. Katherine's Docks.

Nautical Notices.

The Vigias of the Ocean.—The following extract of a letter from Capt. Vidal, R.N., in command of H.M.S. Styx, will interest our nautical readers, on whom we trust that the concluding remark will not be made in vain :—

Extract from Capt. Vidal's Letter, to Capt. Beaufort, dated Fayal, 12th August, 1844.

I had nearly omitted to mention, (and I think it a fit subject for the *Nautical Magazine*,) that on the 20th July, at 8h. 15m. a.m., while passing from Terceira to St. Michaels, in lat. 37° 56′ N., long. 26° 53′ W., the mast head-man reported the appearance of breakers on the starboard bow, the wind was light from the west, there was a little swell, and we were steering S. b. E. ½ E., with the starboard studding-sails set. These sails were immediately taken in, and the vessel hauled to the wind; with our glasses we then saw what appeared to be a small sand bank, such as forms the crowns of some of the coral banks in the Eastern ocean, and there appeared particularly on its southern margin, to be a few breakers. Finding the vessel could not fetch it, I sent the master in the gig to ascertain what it really was; and it proved to be the carcase of a whale, from which much of the blubber had been taken, but some only partially severed lay floating by the side, and by the undulation of the wave presented the appearance of breakers. Now, I have no hesitation in stating, that this object so much resembled a sand bank, or it might be a tide rock at low water, that had I left it unexamined, I should certainly have reported the probability of its being either one or the other; and in so doing I should have added another Vigia to those which disfigure the charts of the North Atlantic Ocean. I mention this circumstance thus in detail, that should any such appearance be again seen, it may induce the commanders of our vessels to give a little more of their time and attention to what they see, by which they will spare their brother navigators much unnecessary anxiety.

Enlargement of the Harbour of Grenaae, Jutland.—By a letter received at Lloyd's from Grenaae, it appears that the harbour of that place, which hitherto has had only six feet water in it, and which with sand banks in it, has prevented large ships entering, will by the consent of Government, be

considerably improved by the formation of a commodious basin, which will admit all vessels under the draft of 10 feet, and shelter about 40 vessels.—*Morning Post*, June 18.

With the view of preserving the following information for the benefit of our readers, we insert it, as it has appeared in the daily journals. With regard to the buoys of the river Jahde, those bearings which we have distinguished with a *, are incorrectly stated in the newspapers.

The lights on the coast of Norway, are among those which appeared in our August number, page 526.

Lighthouse on the Island of Bangoe.—The following has been received at Lloyd's:—

Admiralty, August 15, 1844.

Sir.—I am commanded by my Lords Commissioners of the Admiralty to transmit to you herewith, for the information of the Committee for managing the affairs of Lloyd's, copies of the translation of two notices received from Her Majesty's Consul at Elsinore, one respecting a light on the Island of Bangoe, in the Little Belt, and the other describing two new beacons to be exhibited in the Lyse-ground in the Cattegat.

I am, Sir, your most obedient, &c.

To W. Dobson, Esq., Secretary, Loyd's. Sidney Herbert.

(Translations.)

The light on the Island of Bangoe, between Assens and Awesund, established for the guidance of the packets crossing the Little Belt, which had hitherto lit up the passage only south of that island, will within the present summer be raised 5 feet higher in a lantern at the top of the lighthouse ; the light will thereby become visible from all sides, except in the direction of about N. E.b.E., in which direction it would be concealed a short way by Bangoe town. During the progress of the work connected with this contemplated change, which will prevent the original light from being shown for a time, light will be afforded by a large lantern with reflectors, which will be fixed at the same height, and which will light in the same direction as the red lights.

General Board of Customs and Trade, July 12, 1844.

In the course of the month of August of this year, two beacons will be laid down at the Lyse-ground, in the Cattegat, N.E., on the Island of Hesseloe—viz., one beacon with two brooms at the top, at the N.E. end of the aforesaid ground, in 4¾ fathoms water, and by bearings, Hesseloe lighthouse S.W. ¼ S., the Koll, E.S.E. ¼ E.

One beacon, with one broom at the top, at the N.W. end of the ground, in 4½ fathoms water, and by bearings, Hesseloe lighthouse S.W.b.S., and the Koll E. by S.

The beacons will remain exposed throughout the year.

General Board of Customs and Trade, July 12, 1844.

Lights on the Island of Udsire.

Admiralty, August, 1844.

Sir,—I am commanded by my Lords Commissioners of the Admiralty to transmit to you, for the information of the committee for managing the affairs of Lloyd's, a copy of the translation of a notice received from Her Majesty's Consul General at Christiania, announcing the erection of two new lights on the Island of Udsire.

I am, Sir, your most obedient, &c.

To W. Dobson, Esq.. Secretary, Lloyd's. Sidney Herbert.

Notice to Mariners.—The Royal Norwegian Naval Department, has, under date of July 15, at Christiana, given notice, that the two new lights erected on Udsire, eight sea miles N.W. of Stavanger, will be lighted for the first time on the 15th of August in the evening. They are fixed lights, which throw a glare round about 330 ells of one another, situated S. 68° E, and N. 68° W., according to corrected compass. These lights will burn from Michaelmas till Easter, half-hour after sunset till sunrise. The altitude of the lights, above the level of the sea, is 248 feet, and to serve as a land mark at day time, the steeples are painted light green. The latitude of the easterly steeple is 59° 18′ 18″, and the longitude 4° 53′ 24″ E. of Greenwich. The distance at which the lights are supposed to be seen is calculated at from four and a half to five sea miles in usual clear weather.

Alteration in the Buoyage of the River Jahde.

Admiralty, August 15th, 1844.

Sir.—I am commanded by my Lords Commissioners of the Admiralty to transmit to you herewith, for the information of the Committee for managing the affairs at Lloyd's a copy of the translation of a notice received from Her Majesty's Consul-General at Hamburgh, respecting an alteration in placing the buoys in the river Jahde.

I am, &c.,

To W. Dobson, Esq., Secretary, Lloyd's. Sidney Herbert.

(Translation.)

Official Notification respecting the laying down of Buoys in the River Jahde.

A close examination of the sands at the mouth of the Jahde, and subsequent changes have rendered it necessary to increase the number of buoys, and to make some alterations in the placing of them.

The following, regarding their position, is herewith publicly made known :—

The course of the Jahde is marked at present by 12 buoys, of which seven lie behind Wangeroge and the Minsen-Olde-Oog, and five in the Upper Jahde, from Hooksiel as far as the Aberhahn Felds, viz :—

First.—Behind Wangeroge and the Minsen-Olde-Oog. On entering—

A—On the larboard side.

1.—At the beginning of the Jahde Plate is a white buoy with black stripes, and marked on its uppermost side with a crown and "Jahde" lying at low ebb, in 4¾ fathoms of water, Wangeroge light bearing S.W. ¼ W.; Minsen S. ½ W.; Weser Schlussel buoy N.b.E. ¼ E.

2.—At the end of the Jahde Plate, the length of which is 45,000 feet, is a white buoy in six fathoms water.

Wangeroge light bearing W.N.W.; Minsen and buoy E., S.W. ½ W.; Weser light vessel E.b.N. ½ N.; Sengwarden S.W. ¾ W.

B.—On the starboard side, off the Plate, the length of which is 30,000 feet, which commences north of the Blanc Balge, and E.b.N. ½ N. of the Wangeroge lighthouse, and goes thence as far as the Minse-Olde-Oog, is.

3.—Black buoy A, lying in 5 fathoms of water Wangeroge light bearing W. b.S. ½ S.; Misen S.b.W.*; Weser Schlussel buoy N.b.W.*

4.—Black buoy B, lying in 4½ fathoms of water, Wangeroge light bearing W. ¼ S.; Minsen S.b.W. ½ W.; Weser Singal-vessel E.S.E.

5.—Black buoy C, lying in 5½ fathoms water, Wangeroge light W. ¼ W.; Minsen S.W.b.S. ½ S.; Weser Singal-vessel E.S.E. ½ E.*

6.—Black buoy D, lying in 5 fathoms water, Wangeroge light W.b.N. ¼ N.; Minsen S.W. ½ S.: Weser Singal-vessel E. ½ S.

7.—Black buoy E, lying in 5 fathoms water, Wangeroge light N.W.b.W. ½ W.; Minsen S.W. ½ W.; Weser Singal-vessel E.N.E. ¼ E.; Second White Buoy N.E. ½ E.; Sengwarden S.b.W. ½ W.

Second.—In the Upper Jahde,

C—On the starboard side, off the Vaslappen Plate.

8.—Black buoy F. lying in 5 fathoms water, Bremerhaven bearing E.N.E. ½ E.; Hooksiel Mill W. ½ N.; Sengwarden S.W. ½ W.

9.—Black buoy G, lying in 5 fathoms water, Bremerhaven bearing N.E. ½ E.; Hooksiel Mill N.W., Sengwarden W.b.N.; Hopperhorner Mill S.S. W. ½ W.

D.—On the starboard side, at the end of the Hoppenser Plate.

10.—Black buoy H, lying in 4 fathoms water, Sengwarden bearing N.b.W. N.; Hopperhorner Mill W.b,N.; Eckwarden Mill E.S.E.

E.—On the starboard side, after having passed the Varelersiel, and before the meeting of the Marienseler Tiefs and Strinhausen Tiefs.

11—Red buoy in 3 fathoms water, Hopperhorner Mill bearing N.W. ¼ W.; Eckwarden Mill E.; Schwerburger Mill S. ½ E.

F—On the starboard side, after having passed the Varelersiel.

12.—White buoy, lying in 2½ fathoms water, Hopperhorner Mill bearing N. W.b.N.; Eckwarden Mill N.E.b.E. ½ E.; Schwerburger Mill S. ½ E.

On entering, vessels must take the following course :—

a.—From the buoy A to B, E.S.E. Width of the stream 3,000 feet, depth of the same, 4 to 6 fathoms.

b.—From the buoy B to C, S.E. ½ E. Width of the stream, 2,500 feet, depth of the same to 5 to 6½ fathoms.

c.—From the buoy C to D, S.S.E. ¼ E. Width of the stream, 3,000 feet, depth of the same 5 to 7 fathoms.

d.—From the buoy D to E, south. Width of the stream, 3,500 feet, depth of the same 5 to 7 fathoms.

e.—From the buoy E to F, S. ¼ W. Width of the stream 8,000 to 10,000 feet, depth 6 to 6½ fathoms.

South of the buoy E, at a distance of from 5,000 to 6,000 feet, runs the strand of Minsen-Olde-Oog, of 4 fathoms depth, close to the marked course, and in the direction from F to the Bremerbake, the width of the river is only 5,000 feet, there being two sands E.N.E. of F, where there are only 2½ to 4 fathoms water.

f.—From the buoy F. to G, and as far as the Rusrtingersiel Aussentief, S. ½ E. Width of the stream 7,000 feet, and before the Rustringersiel Aussentief only 3,500 feet; depth of the stream, 5 to 6 fathoms.

g.—From the Rustringersiel Aussentief, as far as the buoy H, S.b. W. Width of the stream, 3,500 feet; depth 5 to 8½ fathoms.

h.—From the buoy H, beyond the red buoy, as far as the white buoy, S. b. W. Width of the stream, 4,000 feet, depth 8½ to 3 fathoms.

i.—From the white buoy as far as the Varelen roads, S. b. E. ½ E. Width of the stream, 2,500 feet, depth 3, 2½, and 1½ fathoms.

Of these buoys the one marked "Jahde" will remain moored during the winter, the buoys 2 to 7 will be replaced in the beginning of November by Bogin, the buoys 8 to 12 will be then removed altogether. All the buoys removed in November will be replaced in spring, as soon as the weather permits of it.

In order to cover the expenses of these buoys, a tonnage of eight groschen (gold,) for each oat last of the burden of a vessel entering the Jahde, will be levied. Such tonnage must be paid to the receiver appointed by the bailieship of Minsen, by all vessels of five oat lasts and upwards, whether they seek a place of refuge, or freight, or to discharge their cargo, if they come to an anchor in the Jahde, south of the black buoy E. sub. No. 7, or if they visit a port or creek of the Jahde. Each vessel, will, however, only once a year be liable to pay tonnage.

All bailieships bordering on the Jahde, are hereby ordered, at the request of the lawful receivers of such tonnage, to assist in levying it in the same manner as other public taxes, and to decide in cases of dispute according to the foregoing regulations. From the decision of such bailieship, an appeal can only be made to the Government.

Grand Ducal Government,
Oldenburgh, June 4th, 1844.

MUTZENBECHER.
BUCHOLTZ.

Directions for making the Guano Island of Ichaboe.—The following is an extract of a letter received at Lloyd's, dated Ichaboe, May 22, 1844:—"Vessels bound to Ichaboe should by all means, if possible, make the land to the southward of this place. I do not think it necessary to make Pedestal Point, for they may be deceived looking for the Pillar and Cross, as I have been informed by several shipmasters lying here, who have made the Point, that they do not exist.* If vessels make the land to the southward, it is quite sufficient. Ichaboe lies in lat. 26° 19′ S., long. 15° E. If, unfortunately, a vessel should be driven to the N. by strong gales from the southward, or otherwise, I would recommend working along shore; going in as near as is prudent towards the evening, and stretch off a part of the night, so as to be near the land again an hour or two after sunrise; by so doing they would take advantage of the land breeze, which varies a few points at night from the land. The current is not always alike, neither does it always run with the same velocity. When about the latitude of between 26° 15′ and 26° 25′, and the land is made, mountains will be seen inland. Bring these to bear S.E., and steer directly for them, there will be no difficulty in making Ichaboe. The land to the north of those mountains is level, composed of sand-hills and decomposed granite. When the island is seen, steer for it until you come within two or three miles, then go between the south part of the island and the main. I recommend this passage as the best for many reasons. In the first place, there is a passage within a quarter of a mile of the island above a mile wide; the wind is generally from the southward; and the current is seldom from any other quarter than running to the northward. If you go by this north passage, it is more shallow, and on account of the wind being southerly, and the current running northerly, it is next to impossible to beat up to a good berth; as the ships lying so close together will not admit beating without doing or receiving damage, or both. There is a reef off the south end of the island, as also one off the main land; but there is a mile between them, with a good depth of water, so that a line-of-battle ship might beat between them without fear of any danger; and you can let go your anchor were you to windward, and drop your vessel in any berth you choose.

Errata and Corrections in the Practice of Navigation.—*By Lieut. Raper, R.N.*

(Continued from p. 53.)

Page 16, No. 65, line 7, *alter* FE *to* ED
86, line 7, *alter* N. 74° 58′ E. *to* N. 75° 2′ E.
474, (29) 2, A considerable error having been found by Sir E. Belcher, in the received long. of Socorro, *alter* the position given *to* S.E. extreme, 18° 43′ N., 110° 53′ W.
Also, as Benedicito (or Berto) Id. is affected by this correction, *alter* 109° 52′ *to* 110° 44′.
630, log. sine sq. of 3h. 40m. 25s., *alter* 30236 *to* 30326
3 40 27 *alter* 30477 *to* 30447

Sir E. Belcher has also corrected the position of Clarion Id., the summit of which, 1500 ft. high, is in 18° 22′ N., 114° 40′ W. These longs. are reckoned from San Blas in 105° 15′5.

* By subsequent information it appears that the Pillar and Cross do exist, but of so small dimensions as to be invisible except when very close to it.—*Shipping Gazette*, August 7.

The Surveyor of the Navy and his Ships.

There is no public officer who, in his official capacity, has been more aspersed than Sir William Symonds, and yet there is no one who has rendered greater service to the country in the improvement of the Navy than he has. Few, however, if any, of his detractors are to be found among nautical men, because all who have ever sailed in his ships are aware of their superior quality in point of speed and stability, and the much greater accommodation they afford to both officers and men over the old vessels of the same class. Sir W. Symonds, in doing away with a useless but expensive establishment at Portsmouth, brought a hornet's nest about his ears, since which, when any of his vessels, no matter of what class, have been launched, they have always been pronounced to be full of faults. The best practical refutation that can be given to the aspersions against Sir W. Symonds and the Assistant-Surveyor, Mr. Edye, is the fact, that no less than from one hundred and thirty to one hundred and fifty vessels now on the Navy List have been constructed, or are in the course of construction, by the present Surveyor. Many of these vessels have been at sea for years, and their capabilities have been repeatedly and fully tested; and if the official reports furnished by their respective Captains were not of the most favourable character, the Lords of the Admiralty would not continue to build others upon the same plan.

The following is the list of the vessels that have been built, or are being built, by Sir W. Symonds:—

The Queen, 110; Royal Frederick, 110; Victoria, 110; Prince of Wales, 110; Albion, 90; Aboukir, 90; Algiers, 90; Exmouth, 90; Hannibal, 90; Princess Royal, 90; Vanguard, 80; Collingwood, 80; Goliah, 80; Lion, 80; Madras, 80; Mars, 80; Superb, 80; Centurion, 80; Boscawen, 70; Cumberland, 70; Majestic, 80—line-of-battle ships. The Vernon, 50; Cambrian, 36; Pique, 36; Vestal, 26; Spartan, 26; Active, 36; Alarm, 26; Amethyst, 26; Arethusa, 50; Chesapeake, 36; Creole, 26; Constance, 50; Flora, 36; Malacca, 26; Niobe, 26; Sybille, 36—frigates. Acorn, 16; Alert, 6; Arab, 6; Bittern, 16; Britomart, 10; Calypso, 20; Coquette, 20; Crane, 6; Cygnet, 6; Daphne, 18; Dart, 3; Despatch, 6; Dido, 18, Dolphin, 3; Express, 6; Fantome, 16; Ferret, 6; Flying Fish, 12; Goshawk, 12; Grecian, 16; Harlequin, 16; Helena, 16; Heroine, 6; Hound, 6; Kangaroo, 6; Kingfisher, 12; Liberty, 16; Lily, 16; Linnet, 6; Mariner, 6; Martin, 6; Pandora, 6; Pantaloon, 10; Penguin, 6; Persian, 16; Peterel, 6; Philomel, 6; Pilot, 16; Racer, 16; Ranger, 6; Rapid, 10; Ringdove, 16; Rover, 18; Sappho, 16; Sealark, 10; Snake 10; Spy, 3; Squirrel, 16; Star, 6; Sylvia, 6; Wanderer, 16; Zebra, 16—sloops, &c., and the following steamers:—

Acheron, Blazer, Bull-dog, Centaur, Cherokee, Cormorant, Cyclops, Dasher, Dragon, Driver, Firebrand, Geyser, Gladiator, Gleaner, Gorgon, Growler, Hecate, Hecla, Hermes, Hydra, Infernal, Inflexible, Locust, Medina, Medusa, Merlin, Mohawk, Polyphemus, Prometheus, Rattler, Sampson, Scourge, Sphynx, Spiteful, Styx, Tartarus, Thunderbolt, Victoria and Albert, Virago, Vixen, Volcano, Vulture, Retri-

bution, Widgeon, making altogether 21 line-of-battle ships, 16 frigates, 52 sloops, and 45 steamers, besides several others that have recently been laid down. Of the line-of-battle ships, the Queen, Albion, and Vanguard have already been at sea, and their characters are fully established. The Collingwood, which is now all ataunt at Portsmouth, is of the same class as the Vanguard, and has been selected by Sir George Seymour as his Flag-ship. She is one of the best specimens of the Surveyor's productions; and the gallant Admiral and all the officers who have visited her, consider her to be one of the most perfect ships in the British Navy; and there is no doubt that her sea-going qualities will prove of the same high character as those of the Vanguard and Queen. It is not only in the superiority of the Surveyor's ships that the country is benefited, but also in the great saving that is effected in building them as compared with the cost of former ships, as will be seen from the following estimate .—

		Guns	Tons	Built by	Cost
First Rates	Britannia	120	2616	Sir R. Seppings	£103,700
	Queen	110	3104	Sir W. Symonds	81,150
2nd Rates	Rodney	90	2622	Sir R. Seppings	78,000
	Albion	90	3111	Sir W. Symonds	77,000
3rd Rates	Thunderer	80	2279	Sir R. Seppings	76,000
	Vanguard	80	3609	Sir W. Symonds	63,120

ADMIRALTY.—Among the recent changes which have taken place is the retirement of the Chief of the Record Office, Mr. H. Bedford, after a period of forty years of faithful service; and the well-earned promotion of Mr. John Barrow, the second son of Sir John Barrow, to the principal chair of that department. In a former number we announced the appearance of the new regulations for Her Majesty's Naval Service, but we omitted then to state, that the arduous task of condensing into them a vast mass of Admiralty circulars, and conducting the work through the press, as well as that of the regulations for H.M. Dockyards, was performed by this gentleman; and the able manner in which it was done, is sufficiently evident in the volumes in question.

H.R.H. the PRINCE of PRUSSIA visited Portsmouth, on Monday, the 19th August, and inspected the Dockyard, and other public departments, as well as H.M.S. *Collingwood*, at Spithead. Our limits preclude the possibility of giving even a condensed account of this visit, but we must not omit to record the generous feeling of the Prince, who when it was hinted that the visit to H.M.S. *Victory* might be dispensed with, replied, "I consider my visit to Portsmouth, a sort of pilgrimage to Nelson's ship;" and when on board, observing the motto of "England expects that every man this day will do his duty," said to those around him, "So long as that sentence is remembered by British seamen, so long I am convinced will England maintain her well earned sovereignty of the seas." These are traits of character worth preserving.

RIO JANEIRO.—A steam-boat accident occurred on the 25th May last, by which above 70 lives are stated to have been lost. The boilers of the Especuladora from great neglect of the safety valv exploded with tremendous effects.

Court Martial.—Joseph Noble (private marine) who was sentenced by a Court Martial to be hung (see p. 532) is to be transported for life.

Lieut. E. E. Gray, R.N., late in command of H.M.S. Bonetta has been tried by a Court Martial and reprimanded.

A letter from Sierra Leone, dated July 7th, contains an account of the drowning of four of the principal persons of the island, by the upsetting of a boat, viz., the Rev. Mr. Illingworth, Colonial Chaplain; Mr. Benjamin Scott, the Colonial Surgeon; Mr. Abbot, Barrister and Colonial Emigration Agent for Trinidad; and Mr. Cathcart, Marshal of the Court of Vice Admiralty, and also Emigration Agent for Jamaica.

Accounts have been received from Quebec, to the effect that the Captain of the brig Hannah, of Dundee, had been murdered by the crew for the purpose of possessing themselves of the vessel and cargo. The whole crew had been committed to prison.

The John Campbell.—Seven of the crew of this vessel charged with mutiny, have been landed at the Gambia from the French brig of war, Antonette, to receive their deserts.

Railway in the West Indies.—The first of these railways is about to be constructed between Kingston and Spanish Town, Jamaica.

Justice in Ireland.—*Potato Cargoes.*—A schooner taking in a cargo of potatoes at Ballyshannon, had her mainmast cut away by some *anti*-potato-exporting individuals. In the subsequent action for damages at the assizes, they were refused by the Judge, as the act of parliament specifies that *unless the ship was sunk or burned, no damages can be taken!* What a glorious act of parliament, what a glorious award of justice! If the vessel had been sunk or burned, would she have been included in it, being a *schooner*, the act specifying that she must be a *ship*.

Floating Breakwaters.—Another of these devices to rob the sea of its natural rights and powers, has been proposed by a Mr. W. H. Smith, and approved of by a body of gentlemen, connected with the shipping interest. The interests of old ocean were not represented, but the friends of the veteran betrayed no anxiety on this account, no doubt from a confidence that he would serve it with all its advantages, as he did Capt. Grover's iron cylinder, off Dover, and as he intends to serve Capt. Taylor's wooden one, off wherever he finds it.

The British Queen Steamer.—The monster steamer is for sale again by order of the Belgian Government. When will she be broken up?

The Pirates of Tongarron.

In November last, the Honourable James Erskine Murray sailed from Hong-Kong with two small vessels—the Anna of 150 tons, and the Young Queen, of 85 tons,—for the purpose of trading with the inhabitants of Borneo, and, if possible, obtaining land for a settlement on that island. The crew of the Anna consisted of thirty-five men, that of the Young Queen of thirty, and both vessels were armed to the fullest extent They carried cargoes of salt and tobacco, and expected to obtain in return antimony and gold-dust. Running down to the Java Sea, they sailed along the southern coast of Borneo, and entering the Straits of Macassar, made for the Cote River, eighty miles from the mouth of which stands the town of Tongarron. The Sultan of this place has been long

conspicuous for his extreme hostility to Europeans. In 1828, Major Mullins, a Dutch Officer, and about thirty Javanese soldiers, were murdered by this piratical barbarian, to whom several other atrocities have been attributed.

With a full knowledge of these circumstances, Murray and his dauntless crew dropped anchor off Tongarron.

After their arrival on the coast, the two vessels—the schooner Young Queen and the brig Anna, entered the river Cote for about eighty miles, and anchored off Tongarron. During the ascent no opposition was offered; and on arriving at the town named, where the Sultan resides, he expressed himself gratified by the visit, and willing to trade with the vessels. Deceived by these friendly appearances, they were moored; but after some time had elapsed, there appeared no intention on the part of the inhabitants to buy or sell. From the large body of armed men congregating around the Sultan's house, suspicions began to be entertained that all was not right. These suspicions were soon confirmed by attempts being made to board, on two several nights, which were prevented by the vigilance of those on the watch. The Sultan had now thrown aside every appearance of friendliness, and there was no longer any doubt of his intention to destroy the vessels if possible. Mr. Murray, deeply impressed with their dangerous position, addressed a letter to the captains of the Young Queen and the Anna, stating his conviction that they could only escape by fighting their way through the gun-boats and floating batteries, with which they were surrounded; he also endeavoured to get hostages from the Sultan, for a safe passage down the river—in this he failed.

The attack commenced upon the vessels on the 16th February, while they were still at anchor, by masked batteries from the shore and gun boats. They slipped their cables, and commenced their almost hopeless attempt to fight their way out of the river, surrounded by numerous boats, which kept up an incessant fire from their long brass guns. On every turn of the river, they found a fresh battery to contend with, the boats keeping up the pursuit, out of range of the swivels, but not of the long guns, from which, in the Young Queen, there were fired 550 shot, and a proportionate number from the Anna. At one time the Anna got on a mud bank, but her consort nobly bore up, and ranged alongside, for her protection until she got off. But for this, she would inevitably have been taken. The night being calm, with a strong ebb tide, the two vessels were lashed together, and allowed to drift with the current, determined to escape or perish in company; ahead of each was a boat to pull them round when they got broadside on to the current. The men in these boats, state positively that they heard English voices, hailing them from the shore.

After 36 hours of continuous fighting, they reached within a few miles of the mouth of the river, and escape appeared certain. But they found a numerous fleet of boats ahead of them, which had entered through some unknown creek. This was the last and most desperate attack, and the number of pirates killed must have been immense. With personal safety almost within his grasp, here poor Murray was killed. He was fighting the mid-ship guns, when he was struck by a two-pounder on the breast; death was instantaneous.

They at length passed the bar and flats at the mouth of the river, though at sunset the boats were still in chase.

During the whole affair, the conduct of the officers and men was excellent. An unflinching determination was evinced, to escape or die in the attempt. Mr. Murray was the moving spirit by which they were all influenced, and it is deeply to be regretted, that he was cut short in the very vigour of life: with his talents and energies, he might have done much to retrieve past misfortunes.

We regret to state, that on the 23rd of March an attempt at mutiny was made on board the Young Queen, in which one man was shot. He is still a prisoner on board.

As a matter of course, the Admiral upon this or the East India station, will not permit this daring affair to pass unpunished. There is not a sufficient depth of water for heavy ships, to carry them to the town of Tongarron; but the

small iron steamers, of which there are several in India, and one here, are admirably fitted for the service.

After their escape, the Young Queen fell in with H.M.S. Samarang, Captain Sir E. Belcher; this energetic Officer will, no doubt, put himself in communication with Sir W. Parker, if he be still on the Indian station, and with Sir T. Cochrane, who is unfortunately absent from this port. We do not suppose that Sir E. Belcher will attempt anything with his own vessel, her draft of water would render the chastisement, which must be ample and complete, impossible.

The following is a list of the killed and wounded on board the two vessels :—

Killed,—Hon. James Erskine Murray, Young Queen; James Dance seaman, Anna; John Thomson, boatswain, Anna.

Wounded.—Mr. B. C. Hart, Anna; Mr. McNyles, Anna; John Miller, Gunner's Mate, Young Queen; William Thomson, Gunner, Anna; William Constance, boy, Anna.

We are informed, the trading speculation was so complete a failure, that, on provisions falling short, both vessels were constrained to barter their guns for rice at some other part of the coast. The mouth of the Cote or Gote river has long been infested with piratical prows, which from thence can prey at pleasure upon such small craft as may unfortunately become becalmed at the entrance of Macassar Straits. We trust, therefore, that the treacherous conduct manifested towards these two British vessels may lead to a small expedition being sent to root out this nest of hornets.

Reports have frequently been prevalent in these seas of European captives having been seen by native vessels within the territory of this Sultan; and the English voices spoken of above would seem, at least, to give some colouring of truth to such rumours.—*Hong-Kong Gazette.*

Capture of the Mediterranean Pirate.

The *Observateur* of Trieste of the 9th announces that the merchant vessel Vittoria, which had arrived at Ragusa from Otranto, had brought word that a Neapolitan war steamer had captured off Calabria a piratical vessel, manned by sailors of all nations. The *Lloyd's* of Trieste of the 7th, states that the Austrian war schooner Fenice had received orders to cruise on the coast of Albania against the Cymariotes.—*Times.*

In calling attention to this capture we must refer our readers to the April and July numbers of the *Nautical Magazine* (p.p. 219, 445,) for an account of some of the many piratical depredations committed in the Mediterranean in the present year. Now that a capture of these ruffians is said to have been effected, it is to be hoped the Neapolitan Governmentwill make a severe example, should, their prisoners but prove to be the pirates for whom search has been so fruitlessly made during the last few months. Some of our Malta correspondents will probably favour the *Nautical* with such information as they may acquire in this matter, which has throughout created not a little sensation among the masters and mates of our merchantmen trading up the Straits.

The Saladin.—The piratical crew of this ship, recently arrested at Halifax, (an account of whose proceedings we gave in our last number,) were put on trial in that city, before the Supreme Court, on the 18th ultimo.

Four of them, Anderson, Travaskiss, *alias* Johnson, George Jones, and William Hazelton, were first put on trial on the charge of piracy. One of them pleaded guilty. The jury brought in, after 15 minutes consultation, a verdict of guilty. On the next day, the prisoners all pleaded guilty to the charge of the murder of Captain M'Kenzie. Carr and Galloway were then tried for the murder of Capt. Fielding. The Court charged the jury, that the crimes of Fielding, who must have been the inducer to the original piracy, were no palliation of the guilt of

his murderers. The jury, however, brought in a verdict of Not Guilty. A similar verdict was returned, after the trial of the same men for the murder of Fielding's son. On Tuesday, July 23, the four criminals, Johnson, *alias* Trevaskiss, Charles Anderson, the Swede, George Jones, and Wm. Hazelton, were executed on the hill west of the Roman Catholic Cemetery, and south of the Spring-garden road, in view of that sea whose waters they had polluted with blood, and in the presence of a large concourse of spectators. Their demeanour was firm, and resolved; they walked up the steps to the gallows, where their earthly existence was so soon to terminate, without the slightest assistance, and were immediately engaged with their reverend attendants in religious exercises. After a little while, Jones, who seemed to be the least affected by his awful situation, or who bore it with a more elastic fortitude, shook hands with his companions in guilt, and kissed them on the cheek. He then resigned himself to the executioner, by whom, under the directions of the sheriff, the adjustment of the cords, the caps, and other fatal preparations were made, the signal given, the bolt drawn, and the world closed upon them for ever. Thus closed the mournful tragedy, connected with the history of the *Saladin*.

Captain Warner's Invisible.—It is said that this gentleman if he chooses now has the governments of all the world his competing customers. Has he? We will, at all events here record his offer.

"But I will here, in the face of the world—for what is published by the press of England is read by the whole world—and that there may be no further mistake, misunderstanding, or misrepresentation about the matter, repeat the offer I instructed Sir C. Napier, in terms of his own dictation, to submit to her Majesty's Government:—If the Government will anchor a line-of-battle ship at the back of the Goodwin Sand, out of the ship track, so that no harm may happen to the passing vessels, I will from on board another ship destroy her at a distance of five miles. I am willing to take on board the vessel in which I operate, General Sir George Murray, Captain Viscount Ingestrie, R.N., Captain Dickinson, R.N. and Captain Henderson, R.N., who shall have every opportunity of inspecting my mode of operation, and satisfying themselves that on this occasion I use a projectile.

The kind liberality of my friends enables me to exhibit this experiment without asking the Government for a shilling towards it. If I fail I am to receive nothing but ridicule—of which I have received enough to satisfy any reasonable man already. But, previously, I require a guarantee from her Majesty's Government for its purchase of my secret for 300,000*l.* in the event of my destroying the ship and satisfying the four above named Officers of the feasibility and practicability of my plans.

Lastly, I invite Sir Howard Douglas, Sir Byam Martin, Sir George Cockburn, Colonel Chalmer, R.A., and Commander Coffin, R.N., to attend in another vessel, and watch proceedings.

I am, &c.,

London, Aug. 20, 1844. S. A. Warner.

The Infant Prince.—"*Windsor Castle, August* 6.—This morning, at ten minutes before eight, the Queen was happily delivered of a Prince. His Royal Highness Prince Albert, several Lords of Her Majesty's Most Honourable Privy Council, and the Ladies of Her Majesty's Bedchamber, being present.

"This great and important news was immediately made known to the town by the firing of the Park and Tower guns; and the Privy Council being assem-

bled as soon as possible thereupon, at the Council Chamber, Whitehall, it was ordered that a Form of Thanksgiving for the Queen's safe delivery of a Prince be prepared by His Grace the Archbishop of Canterbury, to be used in all churches and chapels throughout England and Wales, and the town of Berwick-upon-Tweed, on Sunday the 11th of August, or the Sunday after the respective Ministers shall receive the same.—*London Gazette.*

We are happy to add that owing to the excellent state of Her Majesty's health bulletins are discontinued.

Naval Intelligence.

Portsmouth.—Arrivals.—July 20th, *Collingwood*, 80, Capt. H. Eden, anchored at Spithead.—26th, *Vindictive*. 50, Capt. J. T. Nicholas, from S. America.—27th, *Dee*, st.v. Mr. T. Driver.—August 13th, *Thunder*, s.v. Com. E. Barnett, from W. Indies.—Departures.—July 20th, *Resistance*, 42, Com. Patey, for Cork.—21st, *Collingwood* proceeded to Spithead.—August 13th, *Thunder*, for Chatham, to pay off.—In Harbour,—*Victory*, *Excellent*, *Qneen*, *Fearless*, *Nautilus*, *Dwarf*, *Comet*, *Sylvia.*—At Spithead,—*Collingwood.*

Plymouth.—Arrivals.—July 19th, *Madagascar*, 44, Capt. Foote, from Africa.—24th, *Apollo*, Com. W. Maclean, from Woolwich.—21st August, *Victoria, and Albert* yacht, from Portsmouth.—Departures.—25th, *Apollo*, for Newfoundland, and New Brunswick.—In Harbour.—*San Josef*, *Stromboli*, *Confiance*, *Diligence*, *N.T.*—In the Sound, *St. Vincent*, *Victoria and Albert.*

Sheerness.—Arrivals.—21st July, *Aurora*, 50, (Russian) passed up to Woolwich, in tow of a steam tug,—23rd, *Dee*, for Woolwich.—26th, *Spy*, Com. J. O. Woodbridge, from S. Leone.—Departures.—*Apollo*, Com. Maclean.—In Harbour.—*Ocean*, *Raven*, and *African.*

Woolwich.—Arrivals.—24th July, *Dee*, st.v. from Cork.—Departures.—24th, *Dee*, st.v. for Plymouth.—25th. *Meteor.* st.v.Lieut. Com. Butler, for Cork.

Cork.—Remains.—*Volage*, 26, Capt. Sir W. Dickson, with flag of R. Admiral Sir H. Pigot.

Promotions and Appointments.

(From the Naval and Military Gazette.)

PROMOTIONS.

Commodore 2nd Class—W. Jones.

Commanders on the Retired List of 1830—R. Elliott, Twigg, W. Milne (*b*), A. Dale, W. Smith (*c*), J. Wallace (*b*), J. Fitzmaurice, of 1807—F. D. Schaw (1830), and J. Marshall (*a*), (1830).

Commander—R. Wood, from the Retired List of 1830, to the Retired List of 1816.

Lieutenant—C. A. Isakson—H. B. Everest—G. Kerr

Surgeons—J. Allan (*b*).

APPOINTMENTS.

Captains—R. Smart, K.H., (1837), to *Collingwood*—F. Bullock (1838) to *Porcupine.*

Commanders—E. C. Earle—T. Delafons (1814) to the out-pension, Greenwich Hospital.

Lieutenants—H. Bullock (1843) (addit.) to *Penelope*—W. Southey (1814) to *William and Mary* yacht—J. R. Baker (1823)—B. J. Wilson (1828) to be agent in the Mail Packet Service; J. C. Raymond (1828) to command *Medusa*—Philipps, retired from ill-health; A. F. Kynaston (1842) (addit.) to *Collingwood* L. Browell (1828) and W. Robson (1830) to *Victoria* and *Albert*—H. B. Everest to *Formidable*—F. Lowe to *Alban.*

Masters—R. Yule to *Porcupine.*

Mates—Hon. G. Douglas, R. Shedden, A. Hobart and O. Lambert to *Victoria & Albert*—R. Jones and J. T. Arnold (1810) to *Victory*—B. Dixson (1815) to *Ocean*—C. P. Bellamy to *Queen*—C. M.

Shipley; A. W. A. Hood; C. F. D. Voeux to study at Naval College—G. Kerr to *William and Mary*, for service in Lightning—J. Bellis to *Excellent*—

Second Masters—H. Hill to *Flamer*—J. Wallis to *Excellent*—Beach, to *St. Vincent*, for service in *Emerald* yacht—W. Southey to *Lightning*—H. Pennington to *Porcupine*—W. S. Bouchier to *Polyphemus*.

Midshipmen—W. Swinburn, F. Egerton to *Excellent*—D. Williams to *Caledonia*—R. Rawlins, and Messrs. Boileau, Christian, Peel, Tyler, Byng, and Jones, to *Victory*.

Naval Cadets—H. E. G Earle, to *Porcupine*—H, Farrington to *Carysfort*.

Surgeons—J. A. Mould to be Surgeon Superintendent of the Convict Ship *Sir Robert Peel*—J. Nautly to be Surgeon Superintendant of the *Tasmania* Convict Ship—W. R. McLaughlin, M.D., to be Surgeon and Agent at Lough Swilley.

Assistant Surgeons—P. Porter (1841) to *Virago*—P. Slevin (1841) to *Savage*—A. Mitchell (1839) to *Lynx*—J. Belcher M.D., (1833) to *Hecla*—J. T. U. Bremer M D., (addit.), to *San Josef*—W. Fasken M.D., (1843) to *Illustrious*—G. Everset (addit.) to *Victory*, for service at Haslar Hospital—R. P. Chapman (1843) (act.) to *Porcupiue*—A. W. W. Babington (1841) to *Comet*.

Clerks—A. Arlington (in charge) to *Alban*—J. B. Martin (in charge), to *Lynx*—J. W. P. Foord to *Collingwood* v. Parminter, to the Secretary's office of Rear-Admiral Sir G. Seymour; R. J. S. Bettle (in charge), to *Meteor*.

Chaplain—Rev. H. W. Taylor to *Imaum*.

Clerk in Charge—J. C. Allridge to *Meteor*—T. Harris to *St. Vincent*.

Coast Guard.

Appointments—Lieut. E. J. Voules, R N., to command the station at Rickham.

Lieut. R. Jones (*b*), R.N., from Newquay station to H.M.S. *Victory*.

Removals.—Lieut. J. Spurin, from Cowes to Bishopstone; Lieut. A. T. Mosley, from Westgate to Newquay, v. Lieut. Joues, R.N., appointed to *Victory*; Mr. R. J. Bevians, R.N., from Hensbrook to Poole Harbour, v. Lieut. L. David, (*d.d.*).

Lieut. A. Wall, from Gunn's Island to Ballygally, v. Mr. R. Heard, to Hollywood; Lieut. J. Allen, from Rickham to Challaborough, v. Lieut. Tozer, to Gorran Haven, v. Lieut. Lory, to Porthpean, v. Lieut. G. Vallack, R.N., (*d.d.*), Lieut. J. O'Reilly (*a*), from Flamborough to Hornsea, v. Leister, superannuated.

The following Mates passed for Lieutenants at the Naval College, Portsmouth, on Tuesday:—Mr. Thomas H. Molyneux, M. Henry West, Mr. Robert Orme Sargent, Mr. G. H. Whatley, Ms. Robert H. Lee Warner, Mr. George, Mr. Smith, Mr. G. H. Wale, Mr. R. Berington.

Births, Marriages, and Deaths.

Births.

At Belvoir Park, Belfast, the lady of Capt. Gladstone, R.N., of a daughter.

Marriages.

At Newfoundland, Lieut. E. Heathcote, R.N. to Elizabeth Lucy, daughter of Lieut. Col. Law, K.H., commanding the Royal Newfoundland Companies.

At Hampton, July 24, Mr. Cochrane, son of Sir T. Cochrane, Commander in Chief on the East Indian Seas, to the eldest daughter of Rear Admi. Sir G. F. Seymour, Commander in Chief in the Pacific.

At Edinburgh, Aug. 10, Mr. C. Scott to Elizabeth, daughter of J. Scott, M.D., R.N.

Deaths.

At Stoke, Devonport, Capt. R. Blacker, R.N., aged 64.

At Plymouth, July 20, Mr. H. Slenner, Master R.N.

At Plymouth, Aug. 19, Lieut. W. K. O. Price.

At Stoke, Devonport, Com. J. Groves

At New Providence, Bahama, Mr. W. T. Hamlyn, Paymaster and Purser.

At Bury St. Edmunds, Suffolk, in his 76th year, Capt. Goate, C.B. He obtained considerable distinction in the naval service, and was a Companion of the Bath. He was appointed lieutenant in 1790, commander in 1799, and captain in 1809; and was 21st on the list of captains.

Ascension.—The scarcity of water at Ascension has been so great this summer that it has been found necessary to send it there from St. Helena.

The Courier.—The boat of this vessel, with a crew of ten men, on going on shore at the island of Arguin, Cape Blanco, were fired on and made prisoners, with four of the crew of the Margaret, of London, in June last.

Newhaven better than a Ditch.—Thirty-six years ago it might have been, but now, it is one of the best tided harbours in the channel, and ships of 400 to 500 tons burden, can use it without difficulty or danger, *when it is sufficiently tided.*

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st July, to the 20th August 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind. Quarter.		Wind. Strength		Weather.	
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In.Dec	In.Dec	o	o	o	o						
21	Su.	30·32	30·35	63	75	58	76	W	SW	3	3	b	b
22	M.	30·25	30·18	64	79	54	80	SW	SW	2	2	b	b
23	Tu.	30·07	30·03	72	80	56	82	SE	SE	3	3	bc	b
24	W.	29·99	30·03	73	77	60	80	E	E	4	4	bc	bc
25	Th.	30·01	30·01	70	82	57	83	SE	S	1	1	bc	bc
26	F.	30·00	30·08	65	72	63	73	NW	NW	3	5	o	qbcm
27	S.	30·21	30·24	63	72	60	74	NW	N	2	2	bcm	o
28	Su.	30·25	30·22	67	80	54	81	SW	SW	1	2	bcm	bc
29	M.	30·02	30·00	61	69	60	70	NW	N	3	5	bc	qbc
30	Tu.	29·84	29·66	62	66	51	67	SW	SW	4	7	o	qop 3)
31	W.	29·58	29·68	63	64	57	66	NW	W	6	6	qbc	qbc
1	Th.	29·76	29·80	58	57	48	61	NW	NW	5	6	qbc	qop (3)
2	F.	29·90	29·92	56	61	46	64	W	SW	3	3	bc	bcp 3)
3	S.	29·52	29·50	59	62	52	64	S	SW	7	8	qbcp (2)	qbcp (3)
4	Su.	29·70	29·80	59	71	54	72	NW	W	6	4	qbc	bc
5	M.	29·88	29·85	60	65	50	72	SW	S	1	2	bc	or (4)
6	T.	29·58	29·61	63	67	57	68	S	SW	3	5	op (2)	qbc
7	W.	29·70	29·73	61	65	52	66	SW	SW	4	6	bcp 2)	qbc
8	Th.	29·65	29·70	58	67	50	68	SW	SW	2	4	bc	bc
9	F.	29·81	29·81	58	66	49	67	W	W	3	3	bc	bc
10	S.	29·67	29·63	56	64	48	66	NW	N	1	1	bcm	bcm
11	Su.	29·85	29·82	55	67	47	68	W	W	2	3	bm	bcmr (4)
12	M.	29·43	29·51	58	64	55	65	SW	NW	6	5	qor (1) (2)	qbcp (3)
13	Tn.	29·69	29·67	60	60	54	62	SW	S	4	2	o	or (3) (4
14	W.	29·40	29·28	57	53	52	58	SW	NW	3	6	or (2)	qor (3)
15	Th	29·58	29·64	58	60	48	62	NW	NW	5	6	qbc	qop 3)
16	F.	29·94	29·98	56	66	53	67	W	W	1	3	bcm	bcm
17	S.	29·80	29·90	62	62	58	64	W	NW	6	5	qbc	qbc
18	Su.	30·06	30·14	54	63	48	64	NW	NW	4	4	bc	bc
19	M.	30·16	30·14	55	67	46	68	NW	NW	4	4	bc	bc
20	T.	29·93	29·85	65	75	60	76	W	W	3	4	bc	bc

July, 1844.—Mean height of the Barometer=29·940 inches; Mean temperature=62·5 degrees; depth of rain fallen 3·064 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Lieut. Ryder's letter on Heights has reached us.

Tasman and Albion shall be located in our next.

Thanks to our friend E for the discussion on the Basin, which shall be modified for N.M.

Hunt, Printer, 3, New Church Street. Edgware Road.

The Meiacoshima Islands, *Formosa*.

[The entire ignorance in which we have remained to the present time of a group of islands which the trade with China, is likely to bring under the notice of our shipping, arising from the supplies they may afford, and their peculiar position, must render all information concerning them of great importance. While the surveys of Sir Edward Belcher, therefore, are going forward, the following remarks on the navigation and resources of these islands from him, must be acceptable. They are known on the Charts by the name of the "Madjicosimah" properly "Meiacoshima" islands, eastward of Formosa.

On the 2nd of November, 1843, H.M. ship *Samarang* quitted Macao, with the object of making the shortest passage to the Meiacoshima group, against the N.E. monsoon.

After a tedious beat up the coast in order to clear the Lema Islands, on the 11th November, Sabtang was seen, one of the Babuyan group, an island hitherto considered one of the Bashees, and on the morning following, having beat up between Ibuoas and Sabtang, she anchored in 15 fathoms.

Strong gales prevailed, but the survey of the western side was completed, when a letter from the Alcalde and Commandant of San Domingo, induced her to shift her position to that bay in the island of Batan.

On reaching the bay of San Domingo, the Spanish colours were flying in the remains of two forts, and the officers of the guard proceeded on board with many apologies for the non-attendance of the Alcalde. This functionary subsequently received Sir Edward Belcher with much warmth, and offered every assistance in the way of supplies.

A few days were passed at San Domingo, when the *Samarang* proceeded to the bay of San Vicente, on the western side of the island of Batan, and completed the survey of these four islands, as well as securing several points on Ibayat and Round island to the northward.

The bay or rather anchorage of San Vicente, (erroneously termed Ivana) in the chart, is merely the landiug place for the Pueblo of Ivana, which is situated on the S.W. angle of the island, and about one mile from San Vicente, where only a few huts remain.

This group containing Batan, Sabtang, Ibayat, Ibugos, Calayan, and Oyabuyan (the two last not seen,) is termed the Batanas; the islands are all subject to the authority of the Alcalde, who resides at San Miguel, and is supported by a military guard.

The lat. of San Domingo 20° 27′ 26″ N., long. 121° 57′ 00″ E., variation, 0° 23′ W. The island of Batan has three convents, with a Padre, at each of the three principal Pueblos, viz. San Miguel, San Carlos, and Ivana,—the principal residing at Ivana.

The natives who are a cheerful and remarkably well-formed race of people, much resembling the Dyaks, do not generally understand the Spanish language, but speak one peculiar to this group. Even the Alcalde himself is compelled to refer to the assistance of the Padre in his communication with them. Both men and women are handsome,

and have a remarkably agreeable expression of countenance, but mistaking us for freebooters, on our first arrival, they were not easily induced to come near us.

The Islands of Batan and Sabtang are mountainous, with many broad cultivated spots. The former is particularly rich in its soil, and produces yams, sweet potato, and its varieties, maize, onions, garlic, rice, grain, &c.

Indeed the only want appears to be variety of seed: cattle, sheep, goats, pigs, and poultry, are abundant and reasonable; wood is plentiful, as well as water, but this latter necessary is difficult to procure, as the rivers are barred by reefs, which prevent boats from approaching, or rafting off in sufficient quantity for ships of war.

This however would soon be remedied, if the visits of vessels rendered it important, indeed the necessity of some arrangement of the sort, is seen by the Alcalde, who is a very superior and intelligent young man.

The population of the group is as follows:—

Ibayat . . .	Sta Rosa . . .	580
" . . .	Sta Lucia . . .	268
" . . .	Sta Maria . . .	318
" . . .	Sta Rafael . .	340
		1506
Sabtang . .	San Vincente . .	1506
Batanes . . .	San Domingo . .	3696
" . . .	San Carlos . . .	1600
" . . .	San Jose de Hama	1594
" . . .	San Antonis . .	1000
Calayan . . .	. . .	230
Babuyan . .	. . .	96
		11238

The *Samarang* quitted Batan on 27th November with a promise to return, and with a fair breeze from S.E. started afresh for the Madjicosimas. On this northerly course she gradually fell off to N.N.E. but found a N.E. set, so that she made the island of Samasana, instead of Botel Tobago. But working along the eastern side of Formosa, and stretching off for the Madjicosima group, they were seen on the 30th November; but bad weather preventing her getting to windward, she succeeded in reaching the S.W. angle, Ga-tchu-san, (or Ga-tching-san of the natives,) off which is a considerable reef, and passed through this, and before sunset she was securely moored, with not more than room to swing.

Vessels should not venture near these islands after dark, until their dangers have been more closely examined and made known. From the western limit of Hummock Island to the eastern range of the Typinsan breakers, is dangerous. Independent of the many reefs which connect the Islands, the constant strong winds, with haze and rain, during the N.E. monsoon, render the approach at that season, unless in a very clear day, very hazardous.

The visit of the *Samarang* evidently created alarm, but after a conference with our interpreter, (by written communication,) the object of her visit was soon understood, and confidence established.

In a short time an arrangement was made, that a small party should be permitted to survey the islands on land, with the condition that none of the crew should visit the interior of the island, or enter the villages.

On the 6th December the survey was commenced of the island of Pa-tching-san. The official interpreter, and several minor officers attended by numerous coolies, swelled our parties to at least 30 persons. A little spice of independence at first induced us to maintain the pedestrian, but the second and following days, found us mounted on small sturdy ponies.

At sunset the first evening we had advanced about five miles, and took up our quarters for the night at a joss, or religious house, which had been duly prepared for us. Our companions, or rather conductors on this occasion, had, by this time, begun to enter into the spirit of our operations, and ascertained our wishes.

The Interpreter, (Kian Anchee,) a red-capped mandarin from Loo Choo, we found to be a very intelligent, polished, as well as energetic character, and certainly exerted himself in every way to facilitate our operations. He was seconded by another, (Shang-hai,) who from the knowledge he exhibited of the hydrographic features of the island, and his constant exertions in forwarding our surveying duties, received the appellation of the Pilot. Others obtained names adapted to their prominent abilities, not omitting, however Chesterfield, the secretary to the embassy. The moment we were landed, despatches were sent off, as well as written orders to the surrounding outposts, reporting, as we conceived that all was safe. During our examination of Pa-tching- san, which occupied us 21 days, the routine observed daily was similar. We generally mounted our horses about 8h, and by sunset had reached some station, which had been duly prepared for us, and upon any wish expressed to send to the ship, a swift messenger was instantly despatched.

The natives, or persons inhabiting the Meiacoshimas, may be divided into three or more distinct classes. First,—the mandarins, who understand the Chinese written characters, and have either been educated at Loo-Choo, or who have been sent from thence, charged with authority. Second,—probably the first class natives of these islands, who enjoy the second rank, appear to have received some education, write the Loo-Choo characters, and occasionally understand Chinese. Third,—those who possess sufficient property to entitle them to separate themselves from the working classes or slaves, in which class the Coolies are assumed to be.

In the Ga-tching-san Group, we were given to understand that they had five yellow, and one red-capped Mandarin deputed from Ta-lieu-quieu, or great Lew-Kew, who remain about five or more years. But at Typinsan, they appeared to be in greater proportion.

The dress is precisely the same as that used at Lew-Kew, the hair being confined by the same ornament as mentioned by M'Leod and Beechey, viz:—the Kamee-sachee, and Oosee-dashee damask pattern robe and belt with the cap of their order. In their manners, however, those under present consideration vary, in being much more active and

determined, and not unsparing in the methods of coercion, using the bamboo instead of the fan. This rendered them much more interesting than their monotonous friends of Lew-Kew, and induced a greater disposition to form friendships, which they on their part were not slow in improving. As we lived amongst them for some weeks we had opportunities of judging of their manners and habits, free from the cautious circumspection which would be practised by state meetings on the beach.

Their method of dressing the hair, which is generally performed by a youthful valet, appears to engross much time, and requires some dexterity to produce a fashionable finish. Their long black hair, after a great deal of manipulation with an oleaginous matter, is worked up evenly on all sides to the crown of the head, where the operator, confining it by one hand, keeps passing turns of silk between the hand and the head, straining every hair to its root, it is then tied. He then combs out the remainder, and doubling it back over the two fingers expands it over the ligature of the crown, and inserting the Kamee-sashee and Oosee-dashee through the under part completes the operation. It has an air of neatness and cleanliness. The moustache and hair on the chin is allowed to grow to the natural length, but all the hair and whisker to the tip of the chin is closely shaved, similar to the Chinese and people of Lew-Kew.

They are excessively afraid of exhibiting their women. This does not appear to proceed from any jealousy or doubt of their proper behaviour, but rather from the custom of the country. Any defection in chastity entails death on the guilty parties, and in Typinsan two skeletons were pointed out as culprits who had suffered for such misdeeds.

The whole of these islands are subject to Lew-Kew. But any question relative to weighty matters was always turned aside or evaded by by the expresion Ta-lieu-quien, where they appear to acknowledge an Emperor. All high crimes are submitted to trial at Lew-Kew, and we were given to understand, as well as our interpreter could explain between us, that they were sent with the monsoon junks to be tried or executed at Lew-Kew; that death was not inflicted by their own authority at the island, although the case of punishment for adultery before alluded to furnished a doubt upon the point. All bad characters are sent to the off-lying islands, where produce is probably scarce, and labour heavier.

Of crime, however, there is reason to believe these people are comparatively innocent. Everything belonging to us was for a period of six weeks entirely at their mercy. Sometimes our Coolies and attendants would amount to fifty or more, and having been repeatedly changed as we moved from village to village, or to another island, it may be computed that our property passed through the hands of hundreds, not a solitary case of dishonesty, or what could be called theft, occurred.

On one occasion a Coolie was observed to pick up a handkerchief and put it into his bosom, but from their manner of throwing away their cloth paper, used as a handkerchief, there was not the slightest doubt that he considered it cast off. When it was asked for (as lost), it was instantly produced, without a shadow of conscious guilt. Had such a crime been committed, the punishment would have instantly followed,

as the officers appointed to attend us would frequently punish those around us, who even meddled unnecessarily with our property. On the other hand, the mandarins were constantly on the alert for the prevention of crime, and never failed to urge upon us the necessity of taking away temptation, or the opportunity to commit it, and this was the sole fear which seemed to possess them during our visit. As our station marks were of calico, and might be purloined, huts were constructed and guards placed at any bit of rag left; and in every instance where parts of our instruments were missing by accident, the utmost grief and uneasiness were exhibited, until it was recovered. Under these manifest exhibitions of feeling, they deserve being classed as an eminently moral people. Quarrels we did not witness, and the humble and modest Kotou of the Chinese and Lew-Kew, was in universal use among the higher classes.

The lower orders were humble in the extreme, and their casual salutation, on their superior passing them in the fields, was bowing the head, and placing the hands on the knees. Every morning the officer and party deputed to attend on us made their obeisance.

Their food consists principally of vegetables, rice, sweet potatoes, onions, garlic, radishes and turnips. The radish is even larger than that grown in China, and the large size may be assumed at three inches diameter, by eighteen inches in length. Of four-footed animals they have the horse, ox, pig, goat, and domestic dogs and cats; fowls are plentiful, but it did not appear that they indulge much in flesh; fish and vegetables were the only articles used in our presence.

They smoke almost incessantly, and from the mandarin to the lowest caste each has his appropriate uniform, Kamee-sashee Oosee-dashee in the hair, and pipe and pouch as we would wear a dirk on the left side through the sash. The quantity smoked at one time is however trifling not exceeding half a thimble full. The higher ranks use sam-schoo, a spirit equal in quarter strength to whiskey and resembling it closely in flavour. The quantity at any meal does not exceed one-fourth of a fluid ounce.

In our transactions with them they declined money openly, but we have reason to know, from the official representation of the mandarins, that they received about forty dollars at different times, which would be transmitted to the emperor of Lew-Kew. Although, therefore, of little use to them at present, it may possibly produce a return of their comforts on the return of their junks.

In the fair season two junks (called monsoon junks) from each group repair to Lew-Kew, their lading generally consisting of rice, onions, and ground produce. These junks return at the commencement of the north-east monsoon bringing in return head ornaments, pipes, and household necessaries. Beyond this they have no mercantile or marine communication. They maintain that they never have been visited by another nation, and although we met there men of 70 years of age, not a trace could be discovered of their recollection of the wreck of the Providence, or the residence of her crew amongst them. One fact however is remarkable; with all their asserted ignorance of navigation, we found a stone on the northern island of Typinsan Group, the nearest to the disaster alluded to, having the compass points cut out on it. It

was on a mount used as a look-out or lounging-place for smoking. Also upon one of the islands off Kooninsan, on its highest peak, 1500 or 1600 feet above the surface of the sea, a similar stone was noticed. The points compared with the theodolite needle were correct.

In utensils they may be said to be provided with the production and workmanship of Lew-Kew, but they have also many ingenious substitutes, furnished by the shells found on the reefs. Of these, the Tridama, or huge Chama Giga, one of which measured 2ft. 11in., is used as a substitute for a bason. The great Triton having a wooden handle inserted on the first whorl at the column, forms a most admirable tea-kettle, a false operculum being formed of wood. Their own iron or bronze kettles are however always at hand, in which they make their tea when travelling. Their tea is, however, very indifferent, and they were gratified with such as we could spare.

Although the sight of their women was prohibited, we nevertheless had casual glimpses of them, and one or two dressed female children were brought down to view the strangers. These glimpses reminded us of Capt. Smyth's drawing of the Lew-Kew damsel in Beechey's work. The loose negligee dress, and single spoon ornament in the hair, which has a very large fold on the crown, falling towards the front, marks the only distinction between the sexes. Those of the lower classes, noticed by us at unexpected rencontres, were filthy, and excited disgust, rather than curiosity.

Throughout the islands the constitutions of their towns and villages, appeared to be subject to certain established laws, the houses being arranged in squares, bounded by rude stone walls, and planted within with trees of thick foliage, most frequently, high box hedges; within these grest parallelograms, lesser divisional walls subdivided the enclosed space, into ten or twelve houses, with their gardens. The houses which are heavily thatched, have a firm timber frame work, and appear to be constructed on the same model throughout. The principal apartment is neatly furnished, with mats containing the religious tablet, and is furnished with sliding pannels throughout. It generally occupies the left angle in front, where a clean, and frequently gravelled space with a vessel of water at the further end of an enclosed walk, or kind of verandah, would lead one to suppose that it was appropriated to the fairer sex. The second apartment which occupies the right front is used for the men, and sometimes for cooking, although a separate cooking-house is generally attached to each house, as well as every other convenience. Behind these rooms are stowed household property. As every house allotted to us was of this description, we at once fancied that they had selected their places of worship for our accommodation, but we eventually discovered that they were the dwelling houses of the higher classes, and noticed several articles belonging to their female inhabitants.

The flooring is elevated about two feet above the ground, and neatly covered with closely fitted bamboos, upon which the mats rest. Neither chairs, beds, nor any domestic furniture was noticed.

Their temples, or groves for worship, are generally situated in some thickly planted wood, near the sea shore. No images were noticed, a few tablets, containing the names of their favorite deities, moral maxims, &c., and some jars containing flowers or green leaves, were the entire

stock of religious articles. The place alone was considered as sacred, and invariably had a symbolic figure, as a gateway, which on one occasion we noticed at the head of one of the tablets

Their dead are interred in tombs either artificially constructed, or in caverns adapted to the purpose, sometimes, indeed *generally*, these tombs would only be noticed as a pile of loose stones. On four occasions we observed quadrangular buildings constructed of squared coraline limestone varying from thirty to forty feet in length, by twenty or thirty in breadth, with an upper smaller parallellogram capping the base, the whole about fifteen feet in height, with four apertures, and invariably over-run by the ficus religiosa which every where abounds.

On the islands of Ga-tching-san was seen one very extensive tomb, probably that of their principal town, but it was in the Chinese fashion, which also prevails in Lew-Kew.

In several of the tombs which we examined were coffins, but we never met with a fresh body. We observed one bound up in mats and extending the ordinary length of the human form, which would warrant the inference that they are buried naturally, and not burned as asserted of the Lew-Kew people. On the subject of examining these tombs or disturbing their contents they are not so sensitive as the Chinese. On most occasions such elevations offered good stations, and they hesitated not an instant in making apertures to receive the surveying mark which they generally erected for us. The customary oblations at recent tombs as in China and Lew-Kew are maintained here.

We found nothing to admire in any of their handicraft. Their tools are all of the rudest and most primitive description, and although we offered them better they scarcely seemed to accept them with pleasure. But at the last moment we discovered that scissars for trimming the beard and moustache would have been acceptable.

The course cloth for clothing is woven by the females, but all the superior dress articles are imported from Lew-Kew. On the subject of the head ornaments, we were distinctly informed that those of silver could not be purchased, that they were presented by the emperor for good service, and when one of our party offered to silver one of their brass ones, by the application of mercury, the owner recoiled as if from poison, saying that he would be punished if one was found even in his possession.

It might be supposed, surrounded as they are by coralline reefs, that fishing would occupy a considerable portion of their time ; this, however, is not the case. Fish, at this season, certainly does not abound, but every available reef, has its walls adapted for their capture, which perhaps is more satisfactorily pursued, under a warmer temperature. The cultivation of the soil, however is pursued with great success, every available portion of dry soil, producing wheat, sugar-cane, potatoes, or millet. All the hollows which will contain water, are most carefully dammed in terraces, until they reach the sea, by which means their paddy or rice produce is amazingly increased. As these paddy-fields require turning up occasionally, we noticed rather a novel method of effecting it, viz., by turning a great drove of very large sized bullocks into them, and working them by goads and yells in circles, until it was

well churned to the proper consistence. The brilliant tints of those paddy patches, lining the valleys, add much to the beauty of the scenery, which in the islands of Ga-tching-san, and Koo-kien-san, much excited our admiration. They have also a plough worked by the ox, which, with hoes and trowels, complete their farming utensils.

Mr. Adams the assistant-surgeon of the *Samarang* has made the following remarks on these islands.

The variety and beauty of the vegetation, covering the sides of some of the mountains of Koo-kien-san are very striking. The light and glaucous foliage of a species of spondias, mingled with the green prickly leaves of the pandanus, the broad fronds of the palmyra palm, varied with the masses of the dark green cycas, here and there interspersed with the feathery sprays of the elegant acacia, large flowered hibisci, convolvoli climbing plants, and creepers, with here and there the Banana or Norwegian pine, rising from the beds of tall grass, and gigantic reeds, form together a scene of singular beauty and botanic interest. Indeed I much regretted that we were without a professed botanist, or collector on board; our sojourn at Borneo, Batan, and these islands, are points where full occupation would have been afforded.

With respect to disease, the same observer notices, that, owing to personal neglect, opthalmia, in rather a severe form attacks the eyes, frequently producing total loss of vision, many of them are blear-eyed. From the same cause, exanthematous eruptions attack their surface, whilst a species of large plague boil sometimes breaks out, leaving very foul and troublesome ulcers. Elephantiasis is common among the lower orders, and frequently developes itself in a revolting and hideous deformity of the legs.

In the wintry months they suffer from influenza, and catarrhal affections, and during the summer the small-pox occasionally commits terrible ravages. Very few cases of malformation were noticed, and still fewer of any congenital deformity of the limbs.

In both groups we entertained the chiefs on board, and amused them by the exhibition of the magic lantern on shore. At Ga-tching-san, they were anxious to see the guns fired, and were less astonished by the discharges, than we had expected. No arms of any description were noticed amongst them. At the largest town in Ty-pin-san, we saw something which merely required guns to entitle it to the name of a battery; it had also a screen in front, as if intended for archers. These works might have been constructed ages since, when the Chinese or Ladrone Pirates ranged these seas. The houses in the immediate vicinity were also of stone, and the road for a considerable distance was well paved, but this was the only spot on any of the islands, which exhibited any signs of strength. They were not disposed to prevent our entry, indeed offered the walled position, where a staff and colours were exhibited, as our place of rest for the night.

The islands first visited, viz, Pa-tching-san, and Koo-kien-san, afford several good harbours, and with good charts would be safe of approach. One on the Ke-chee side of Pa-tching-san would shelter a large fleet, but it abounds with patches, which rise suddenly from 10 to 15 fathoms over them, and which are clearly discernible. Except on

the northern side of Koo-kien-san, and that just named, watering would be found very difficult, as the reefs extend a great distance from the mouths of the streams.

The Pa-tching-san group numbers ten distinct islands, five only of which possess mountains, the remainder are low islands, similar to the coral island of the Pacific, and similarly belted with reefs, which connect these ten into a distinct group. Besides these, Hummock Island, a high uninhabited mass of rocks, is near the coast, and to the W.N.W. the island of Pseu-bang-yal, with its lofty peak and table base, offering further interest by its examination at some future day. Pseu-bang-yal is probably the Koumi of the charts.

To the eastward, we passed between two low islands, which are dangerous of approach, we suddenly found ourselves in seven fathoms, with a heavy swell to the northward of them, but tacked and ran between them, as our friend the pilot had advised. I suspect these to be Sálú-máh and Ta-la-mah, named by the natives of Ty-pin-san, as visible from the summit of Koo-ree-mah.

The islands of the Ty-pin-san group, are Ty-pin-san, Koo-ree-mah, Y-deah-boo, Y-ki-mah, and Fo-ga-mee.

The S.W. angle of Ty-pin-san, is situated in lat. 24° 43′ 50″ N., long. 125° 14′ 54″ E., var. 1° 23′W.

The anchorage of Ty-pin-san is in the hollow of the reef formed by the junction of Ty-pin-san and Koo-ree-mah reefs. Two dangerous outlying reefs, lie half-a-mile off the southern end of the latter island. The anchorage is rocky with sandy patches between, and not secure in any season. Ty-pin-san should not be approached at all on its northern side, the reefs extending beyond the reach of distinct vision. On the southern side, the reef extends about a mile from the land, and vessels might lie to under its lee, with northerly wind until morning; the drain is southerly. As yet we have not been able to find safe anchorage in the vicinity of Ty-pin-san or its islets.

On the 4th of February, much to our regret, we quitted Ty-pin-san. The natives expressed themselves pleased with our visit, and anxious for our return, but our feelings were certainly not as much interested here as at the Pa-tching-san group.

The morning was beautifully fine, but before noon we were visited by thick rainy weather, and compelled to relinquish any further acquaintance for the present with these dangerous shores. Our course was now shaped for Batan, to re-connect the meridians of both with Hong-Kong.

On the morning of the 7th of February, we dropped our anchor in the bay of San Domingo, Batan. As our crew had been some time on short allowance of bread, we had here an opportunity of indulging them with pigs and yams galore, being cheap, as well as excellent.

Several fine bullocks were also killed and embarked, and a stock of vegetables laid in.

The islands produce everything not only in abundance but also of the finest quality. As vessels may follow us we obtained from the Alcalde the following stipulated prices at which supplies may be obtained in future.

Bullocks, 1st class, ten dollars, 2nd class, eight dollars, 3rd class, four dollars, enough for one days supply; goats, one large, one dollar, small

goats, one to two reals, enough for one day; fowls per dozen, two dollars; pullets per dozen, one dollar; pigs, large size, six dollars; second size, three dollars; young ditto, two to four reals; eggs per hundred, one dollar. Vegetables,—yams per hundred, one dollar and a half; ducais, six reals per hundred; sweet potatoes, large, four reals per hundred; onions per cwt. five dollars; pumpkins per hundred, three dollars; cocoas, two reals per hundred; cocoa nuts per dozen, two reals.

Potatoes, turnips, carrots, radishes, and cabbages may be shortly added to the above, but not for sale within a year. The Alcalde is a very energetic active man, and a good farmer; he deserves encouragement and assistance from all who may visit the Batanes. Good potatoes, and seeds of the various vegetables produced in China, would be truly acceptable. On the 13th February, we anchored in Hong-Kong.

A Pendant to Anchors, and Anchor Weighing.*

(From a Correspondent.)

How many strange things modern investigations, observations, and inventions bring to our knowledge. Nature in her operations often astonishes us with the ease with which she effects her purposes, and the simple means which she employs to produce surprising effects, whilst man is frequently baffled in his attempts. We have heard of such tough adhesive, or rather tenacious ground in an anchorage, as to defy the united labour of a ship's company to purchase the anchor; but which was effected by heaving the cable up and down at low water, and leaving it to the flood tide, acting on the vessel's buoyancy, to lift it out of its bed.

Another lifting power has lately been engaging a good deal of attention. What seaman would dream that, ice formed at the bottom of river anchorage would have power to bring his anchor or cable of iron up to the surface? But such is a fact. The subject on account of it being very little known, and probably not suspected by seamen, becomes of some importance to navigation; for, it is quite possible for a ship at anchor where "ground-ice" is formed, to have her anchor lifted, without any visible agency, and if at night, be driven on shore and wrecked. The fact of this ground or bottom ice, lifting up heavy weights to the surface is unquestionable, and therefore will be the more acceptable and useful to the seaman. The reports are from the Baltic on the Prussian side.

On the 9th February, 1806, during a strong south-east wind, and a temperature a little exceeding 34° Fahreinheit, a long iron chain, to which the buoys of the fair-way were fastened, and which had been lost sight of at Schappels wreck, in a depth of 15 to 18 feet, suddenly made its appearance at the surface of the water, and floated there; it was however, completely incrusted with ice to the thickness of several

* In the April number of the *Nautical Magazine*, p. 226.

feet. Stones also, of from three to six pounds weight, rose to the surface surrounded with a thick coat of ice. A cable three and a half inches thick, and about thirty fathoms long, which had been lost the preceding summer in a depth of thirty feet, again made its appearance by floating on the surface; it was enveloped in ice to the thickness of two feet. On the same day that this occurred, it was necessary to warp the Government ship into harbour in the face of an east wind; the anchor after it had rested an hour at the bottom, became so incrusted with ice that it required no more than half of the usual power to heave it up! Had it remained sufficiently long, and the ice had accumulated sufficiently upon and around it, the probability is, when it disrupted, the anchor would have been brought to the surface. The phenomenon altogether is a very curious one, and the effect little expected generally.

Our worthy correspondent, whose experience and opinion we highly esteem, has touched on the subject of Nautical Etymology in his paper to which the foregoing forms "a pendant." It would perhaps be no easy matter to point out a branch of knowledge in a more imperfect state than the very one in question. Naval men are still content to let the common phrases of their profession "live in sound;"—to leave the task of reducing their nautical phraseology to rule, and by investigating the roots of expression, the origin of terms, to establish laws of orthography in nautical language from which no one may safely dissent, or from which there could be no appeal;—such a work we say, remains yet to be placed in our hands, and would decidedly be a valuable boon to the naval scholar; for in no field has custom more completely run riot, or established its paramount authority, than in that which concerns the seaman. Jack is an adept at names, and no sooner does a new thing start up, than he is ready with a cognomen, no matter what it may be, and that generally is the easiest. Like a child he finds a ready mode of expressing the thing he means, although his name for it is more in keeping with his years than that which will serve infantile lips.* We remember some few years ago being asked by a well informed foreigner, whose acquaintance with our nautical terms is the best we have met with among them, to explain to him what were *a ship's whiskers*. It has been decided of late that ladies wear whiskers as well as gentlemen, but Jack, who has given to his ship all kinds of gear patronized by the fair sex, was beforehand with the shore-folks. The foreigner had no difficulty in discovering their stays, bonnets, ribbands, aprons, earrings, &c., but when he came to the whiskers, he was fairly obliged to give them up. It so happened, that, having served in a ship about the time they came into fashion, we were acquainted with the plan by which some captains, choosing to relieve the bowsprit of the weight of the spritsail yard, adopted whiskers instead of it, as a support for the jib-boom, and flying jib-boom, and accordingly the guys were rove

* How easily children do this we had an amusing instance of a short time since; "To-morrow we are going to the Lobbery Gardens" said a little girl; which said "Lobbery," we found, passed current among the minors for its synonyime in their ears the Zoolog ical.

through iron outriggers, as at present, as a substitute for the yard, these projecting from each cathead, being called whiskers, the guys setting up in-board. This explanation, with the aid of a pencil, satisfied the enquiry.

But to return to our subject of anchor weighing, or "waying." Having adopted a different mode of spelling the latter word, on more than one occasion, to that which it has for some time been in use, it is right we should state our authority for doing so. It is true that a looseness has prevailed among the authorities, which we shall cite, even at the distant period of Sir Walter Raleigh's voyages to America, two hundred and fifty years ago. The first we shall quote, occurs in Sir Martin Frobisher's first voyage to America, the narration of which commences with "about twelve of the clocke we *wayed* at Detford." This passage will be found in Hackluyt's collection of the early voyages, travels, and discoveries of the English nation, published by Evans, London, 1810, and also in Pinkerton's collection. In the same volume, in Mr. Charles Leigh's voyage to Cape Breton we read, "The 13th we weyed anker," again, p. 243, "The 28th we weyed anker at Cottea;" p. 342, "The first day we weyed anker at Musketoes Bay." Then in Sir Walter Raleigh's fourth voyage to Virginia, in the same volume, p. 341, we find, "The 8th May we weyed anchor at Plimmouth, and departed thence for Virginia." We have here the letter *e* instead of *a*, making *weyed* from *wayed*; but we shall find enough of the latter hereafter, which will serve as the authority whence we adopted it.

There is a curious little old volume before us entitled "NORTH-VVEST FOX, or FOX *from the North-West Passage*. BEGINNING with King ARTHUR, MALGA, OCTHVR, the two Zeni's of *Iseland Estoti'and*, and *Dorgia*,; Following with briefe Abstracts of the Voyages of *Cabot, Frobisher, Davis, Waymouth, Knight, Hudson, Button, Gibbons, Bylot, Baffin, Hawkridge:* Together with the courses, distance, latitudes, longitudes, variations, depths of the seas, sets of tydes, currents, races, and over-falls, with other observations, accidents, and remarkable things, as our miseries and sufferings." There is a vast deal more in the title page which we must omit, adding that it is "By *Captain* LUKE FOXE of Kingstone upon Hull, Capt. and Pylot for the voyage, in His Majestie's Pinnace the *Charles*. Printed by his Majestie's command, London: Printed by B. Alsop and Tho. Favvcet dwelling in Grub Street 1635."

Assuredly there are some curious passages in this volume for North-west Fox as he calls himself, although not a man of great erudition, took for his maxim, "Plaine dealing is a jewel," and after giving a brief account of the voyages of the persons he mentions in his title page, then proceeds with the narration of his own.

He quotes Abacuck Pricket on Hudson's unfortunate voyage, and in p. 76 we find him saying, "After this, he wayed and stood S.E;" again in p. 102 of the same, "the wind serving he wayed and stands N.W." Also in relating Sir Thomas Button's voyage he says, "It being calme with windward tyde hee wayed anchor," p. 132. We might multiply our quotations, but we will be content with one or two from Fox speaking of his own proceedings. In p. 218 he says, "I wayed again about half flood;" in p. 226 also, "I wayed at the master's com-

ming aboord clocke 9 in the evening." Again in p. 233 he says, "At 3 houres flood in the night with much adoe I wayed anchor."

The foregoing is sufficient to substantiate our authority for using the word "*way*" and adopting it in preference to "*weigh*," when applied in the character of a verb to the word anchor. It is quite true that Johnson gives Dryden and Knolles as authority for saying that "*weigh*" signifies to raise, as applied to the anchor, but their authorities would in all probability have equally supplied the word "*way*" to the same purpose, and if not those that we have quoted would have done so. We leave the question, therefore, for the reader's decision, with perfect freedom to choose between "*weighing*" and "*waying*," or even "*weying*" an anchor, having given him authorities for all, adding at the same time that if he chooses he may cut the matter short, by entering in his log, as we find in that of the North-West Fox, "This morning at clocke 6 was the anchor on the bow," accommodating the entry to the time of getting underway.

NOTES OF A VOYAGER.—*Passages across the Southern Atlantic.*

(Concluded from p. 548.)

In making passages across the Southern Atlantic, from the African to the Brazil coast, in the parallel of about 20° S. latitude, I have not remarked any particular current, going from Brazil towards the Cape of Good Hope, and crossing the ocean about the 30th S. latitude, I have invariably found a considerable set to the northward, sometimes as much as twenty to thirty miles daily; there is also a constant long swell from the S.W. I, at first, always attributed this set to a northerly current, but am inclined to think latterly, that it may partly proceed from observation of the compass, as I observe the set greatest, when the vessel's head is east, and least, when nearly north, or south.* Mr. Walker's papers on this subject, lately published in the *Nautical*, are well worthy of attention, and it is to be hoped that he will continue observations so beneficial to his own and the Merchant service.

Binnacles and compasses are seldom attended to as they should be on board merchant vessels. On board the vessel in which I am now a passenger, I discovered the other day that the skylight in which the steering compass is fixed is completely fastened with *iron nails*. Another serious mistake, is the now, too prevalent custom, of only having one compass, in the centre of the vessel to steer by. The man at the wheel is, with such a compass, always steering half a point from the given course,

* Our correspondent is aware that the south-west wind on the western coast (and drawing southerly the nearer to the shore) must produce (as all prevailing winds do) a current from to windward and which must prevail considerably to seaward. This has been alluded to by Commander Matson in an early part of this present volume, and is well worthy of the attention of those whose *calling* calls them to the African coast.—Ed.N.M.

in consequence of the angular view he takes of the compass.* The following quaint old-fashioned lines on Navigation, which I got from a very old nautical friend, seem to me to contain advice worthy of adoption even in the present scientific times:—

Navigation is that noble art
That guides a ship when far from land,
And to any distant part
When practised by a skilful hand.
To guide a ship along the shore,
You must have compass, line, and lead;
Likewise a good look out afore,
If any danger be ahead.
When to a harbour you do go,
Or, place of safety for to ride,
You must calculate also,
What time will serve you for the tide.
Navigation in all its parts,
A skilful seaman ought to know,
The use of instruments and charts
When he to foreign parts doth go.
Be careful then to learn this art,
(Some are contented with the name,)
So that you may want no part,
When that you require the same.

Rio de Janeiro.

Since I last sent you some remarks on Rio Janeiro, I have again visited that place, and now beg leave to amend one statement I formerly made, respecting coffee freights. I then stated that foreign vessels generally monopolize the coffee freights, from their taking that article at a cheaper rate, and being enabled to do so from their low prime cost, wages, and provisions. It is not, however, the case that they take lower freights than British vessels, but invariably procure equal, and often higher freights, always having a preference over them for charter. I have lately seen five shillings per ton more, given to a Danish or Swedish vessel, than to a British: this state of things is by no means new, but has existed for years, and the prejudice against British vessels, is becoming stronger every day.

On enquiring into the reasons ascribed for such a preference, I find the merchants and brokers think the foreign vessels better, but principally object to the masters of the British vessels. Interested as I always have been, and still continue in the welfare of the British Merchant Service, this was a melancholy announcement, but undoubtedly true, and my own personal observation, amply confirms this opinion. I have already written so much on this disagreeable subject, that I am unwilling to reiterate what has come under my own observation at the present time, con-

* Excepting the objection pointed out by our correspondent arising from parallax, there can be none to using one compass only for the direction of all the courses of the vessel. And to avoid this objection it has even been proposed in men-of-war that a frame should be constructed in which the binnacle may slide from one side of the vessel to the other so as to be opposite the helmsman on either side. At the same time the different effects of local attraction on the compass in these different positions should be allowed for, a consideration which we fear finds as little attention in many of our merchant vessels as that of the construction of the binnacle itself, as our correspondent shows further on.—Ed. N.M.

duct disgraceful to men holding a responsible situation: there were honorable exceptions, but like angels visits, they were "few and far between." With reference however, to the qualifications of British vessels, I, in some respects, differ from the Rio gentlemen. British vessels are, undoubtedly more strongly and substantially built, than foreign vessels. The models of the latter, are certainly superior, being sharper, better adapted for making a passage, and much less liable to damage a cargo, than the coffin-like constructions we still continue to use in Great Britain. Although the new Registry act, equalized in some measure, the payment of port dues by sharp and full-built vessels, still it did not sufficiently protect the former, and it is a fact, that British ship-owners still prefer the old fashioned model, although reason, and everything else, points out the benefit of the new. They fancy that a vessel which may register 200 tons, and carry 350 tons, must be far more profitable than one of the same register size, which would only carry 300, never thinking that the latter, will, in most cases, make her voyage to the Brazils and back, in two months less than the former,—be less liable to damage her cargo, and meeting with bad weather, not half so likely to strain herself as the beast of burthen. British shipowners have never yet sufficiently understood the value of time, which our trans-atlantic friends know so well is money, and which they improve so much. British shipmasters seem still less aware of the fact, and every day Rio Janeiro bears evidence of it. It is quite common to see a British vessel arrive with a cargo to discharge, it may be, bound to another port to load; or, having a cargo ready for her in Rio, instead of at once commencing to discharge in lighters, which cost the vessel a trifling sum, she will be kept eight or ten days waiting a turn to go to the wharf, sacrificing, by the daily harbour dues, which are being paid, ten times the amount of lighterage, besides the wages and provisions of the crew. It must be conceded also in favor of the foreign vessels, that their commanders are generally superior to the British, in conduct, education, attention to duty in harbour, and particularly in the management of business on shore. It is a very mistaken notion, although a very common one in Great Britain, that a thorough knowledge of practical seamanship, is sufficient for a master of a merchant vessel; indeed it is notorious, that so long as a man can, in the commonest way, navigate the vessel, other qualifications than a *low rate of wages* are seldom thought of by the shipowner.

Much more, however, is decidedly necessary,—education is required, —a knowledge of at least the common forms of business,—the general laws regulating his iron profession,—a discrimination capable of appreciating the character of the people he may have to negociate with,—a general knowledge of the world, and its civilized usages, sufficient to render his meeting with strangers, at least, not disagreeable to them; all these, and many other things are required in the well informed British shipmaster.

Look at the Navy, at the rapid strides there made, towards improvement, not only amongst the men, but particularly amongst the officers, during the last fifty years; notice, how much the condition of the former is ameliorated, how much the latter are improved, in conduct, education, scientific attainments, and general respectability. This im-

provement, has not, however, altogether proceeded from the innate exertions of either officers or men, but has been fostered by the many very beneficial alterations, which have been made in the regulations affecting that branch of the profession.

I cannot avoid again lamenting the failure of Capt. FitzRoy's Bill. No time seems so favourable as the present, for such a bill being carried through as a Ministerial measure, and I may safely say that few measures introduced for some years, would so much benefit the nation, in her peculiarly national service. So much do I individually feel the degraded state of the Merchant Service, that, although disliking every thing like agitation in the O'Connel sense of the term, had I only time, I would never cease agitating this important question in Britain, until some legislative enactment was made, which might give it a chance of relief, from the present degraded state in which it remains.

MEXICANO.

MASSACRE AT MAWEE.

SIR.—The question may very reasonably be asked,—When will the Captains of ships trading, or whaling in the Great Ocean of Polynesia, learn to be cautious in their intercourse with those natives of the islands who have not been reclaimed from their natural state of barbarism.

Year after year we are pained with the recital of tragical events that have occurred to unwary mariners; yet, heedless of such, those who follow, commit themselves, with all the confidence which they would do in their intercourse with a civilized people, to those savages; forgetful, it would seem, that of all animals, untutored man in his savage state, is the most ferocious, and the least to be trusted unguardedly.

I have Sir, been led into this train of thought from perusing an account, which has just been made public, of the massacres of ships' crews by the natives of the South Sea islands. And, as there is no surer medium through which a notice can gain general publicity among seamen than the pages of the *Nautical Magazine* I have Sir, been induced to send you this paper for insertion; convinced, from what has already appeared in your work, on the subject, you will think that the attention of Captains of ships cannot be too strongly drawn to the duty which they owe to themselves, and to those committed to their charge when among the islands of the Pacific.

It appears that accounts have been received of the murder of the crews of two English vessels, by the natives of Mawee, one of the South Sea Islands, early in this year. The first case was that of the Jane of Dumbarton, Capt. Gorman. The brig unfortunately touched at Mawee, where they were immediately attacked, their boat destroyed, and twelve of the crew seriously maimed. The other was the Two Sisters, a South Sea whaler, commanded by Capt. Brend, and every soul of the crew was barbarously murdered. Shortly after her arrival

eff the coast, a large number of the natives of both sexes went on board. The crew were at their duties, but unfortunately one of them happened to take a slight liberty with one of the women, and a dreadful slaughter ensued. The natives plundered the vessel, and in order to carry out their diabolical revenge, fired her, and she was entirely consumed.

It is added that, five fine ships, during the last two years, have been captured and destroyed, and their crews murdered by the savage barbarians of the South Sea Islands.

Such is the published account. The motive assigned for the massacre of the crew of the Two Sisters is, I imagine a mere supposition; for, if the whole of the men were killed, who told the tale? Besides, it is well known that, the male savages of the islands, possess no sensitiveness with respect to liberties taken with their females. I apprehend that, if the truth could be ascertained, it would be found that, the natives were tempted to commit the act, by the want of precaution in the crew; and as to the idea of carrying out their diabolical revenge, by setting fire to the ship, we may, pretty correctly infer that revenge was not the motive, but that it was done as the readiest and easiest way of gaining possession of the iron work of the vessel; that metal in the eye of the savage, being of the highest value.

A similar cause was assigned for the massacre of the Count De Langle, in Peyrouse's voyage of discovery; but it afterwards transpired that that tragical affair was occasioned by the officer of the watch striking a chief, with the flat part of his sword, to get rid of his importunities to buy a pig.

One piece of advice which I shall beg leave to offer to the masters of ships may prove of value to them, though it cost nothing;—namely, "On no account, nor under any circumstances, trust a savage."

The massacre at Wairau, in New Zealand, shows that when, even in degree, half-civilized, these wild denizens of the beautiful islands of the Great Ocean, cannot be trusted. I am unable to point out the position of the island of Mawee; the nearest I can find in sound to it is, Manuae, one of Harvey's Group, eastward of the Society's Islands.

TASMAN.

To the Editor, &c.

THE MERCHANT SERVICE.

SIR.—In the abstract of the forthcoming Bill for the Regulation of the Merchant Service, at p. 510 of the *Nautical* for August, I do not perceive that seamen are to be allowed to exchange *once*, during a voyage, from one vessel to another. This I regret, as I am convinced it would be a great boon, acceptable alike to the seamen and to the captains; to the latter of whom, it would often become a seasonable relief.

Such an indulgence would, it is highly probable, often, if not altogether, prevent desertion; and, as it would be restricted to a single

transfer of services, I cannot perceive any objection to its consummation.

Neither do I see any clause respecting the berths which the seamen are to occupy. This omission is also to be greatly regretted, for until Parliament makes it compulsory on the part of the shipowner or merchant to provide dry and suitable berths for the use of seamen, judging from what I see, hear, and know, many will never give the subject a thought.

A want of good accommodation for the men, occurs oftener in vessels that go Foreign on speculative voyages, that is, for any freights that may turn up, than in the regular traders to particular places. As to the comfort of the seamen, it is generally, in the former ships, totally neglected ;—those that go to New Orleans, Mobile, &c. for cotton, for instance, and trusting to chance for a cargo. If they succeed, they fill every space it is possible to squeeze a bag into, perfectly regardless of trenching upon the already too limited room assigned to the use of both the subordinate officers and men; indeed, the captain's cabin is frequently crammed as full as it can hold, without absolutely blocking it up altogether!

The consequence of such a state, in a warm climate, may be easily imagined. In one ship, recently returned from such a voyage, the heat and steam arising from the crowded state of the vessel, and the nature of the cargo were so intense and unbearable, that the crew, constrained to quit the small space left to them, in the fore peak, were obliged to sleep in the boats, or on the deck, exposed to the vicissitudes of the weather. It is, Sir, from causes like these, that many seamen break down at an early age, or contract diseases that hurry them to a premature grave.

It is to this grasping *(auri sacra fames)* that many of the contentions we hear of so repeatedly as occurring on board merchant ships are to be attributed; but, who can wonder at the conduct of the men, when they are treated even with less care than a pack of hounds?

The stowing of cotton or wool in the cabins and berths, should be prohibited, equally with that of "lumber," on the decks of timber laden ships; and it should also be made imperative on the owners of such vessels, to provide flues for conveying steam into the air, without passing through the seamen's berth.

I am, Sir, rejoiced to find that the quality of the provisions, &c., is to be attended to; but there should be a clause to regulate the quantity allowed to each individual, as I learn, in a recent instance, that the men, had, not only provisions of bad quality, but the quantity, (the allowance,) was very much reduced in consequence of the supply for the voyage having fallen short. This is not only inexcusable but absolutely nefarious.

A circumstance rather startling to the ears of an Englishman, has recently been related to me. It appears that in some of the American ports within the Gulf of Mexico, there is a national cutter, or small vessel of war stationed, (probably for the protection of the revenue.) At certain times this vessel sends an armed boat among the shipping; on her appearance, any Captain who may happen to have a refractory seaman on board, (no matter what nation the vessel belongs to,) or one he

is desirous of punishing, has only to hoist a wheft at his peak, or mast-head, and the American guard boat drops alongside, takes the delinquent out, and conveys him up the river, or wherever the armed vessel is lying. On arriving on board, the man is forthwith tied up and flogged, and then sent back to his vessel!

By what authority does this American officer exercise his "right" and "might" over a British subject? Is it Sir, not an arbitrary stretch of power? The seaman punished has not trangressed any local law, and, indeed, if he had, the *Civil* power is the *authority* there, as elsewhere, by which his case is to be enquired into, and justice awarded.

I suspect there is a spice of "Lynch Law" in such transactions, and therefore it should be enquired into. Have we no Consuls in the Florida, Louisiana ports, and others? ALBION.

To the Editor, &c.

NAUTICAL RAMBLES.—THE LEEWARD STATION DURING THE WAR.

Port Royal and its Associations.

(Continued from p. 565.)

CUMBERLAND harbour, or Guantanimo, one of the most extraordinary inlets in the island of Cuba, or perhaps any where, has many hiding recesses within its entrance, but as it was very frequently resorted to by the British men-of-war, the French and Spanish privateersmen very rarely ventured into it, for they were very well aware of the fact. I speak of the cruising vessels, carrying long guns. Some of the small picaroons, however, such as feluccas, sailing and rowing boats, would if they thought the "coast clear" venture in after plundering neutrals in the offing, and proceed up Agusta River, on the larboard hand, close to the entrance of the harbour, to the Rancheadero, or hamlet of a cattle penn, whence, on mules, the stolen booty would be transported, through a wilderness, to St. Jago, and there sold!

That so perfect and uncommonly fine a sheet of water or rather series of deep-water lagoons, as this inlet presents, and which the celebrated Admiral Vernon was pleased to rename in honour of the Royal soldier (Cumberland) should be left by the Spaniards in the same state it and the surrounding country were found at the time of the discovery, would seem remarkable if we were unacquainted with the fact that scarcely an island in any part of the world has on its shores so many land-locked harbours, or sea-lakes as, I believe, the seaman's old friend, Dampier, termed this class of enclosed waters.

By the early English adventurers it was called Walthenham harbour, and it has always been considered as the "Refuge" haven, (by way of eminence,) of the station, for vessels during the season of hurricanes; and, unquestionably, as a place of retreat, it affords good shelter; especially from east round to north-west, as I have experienced during one of those awful storms; but it is inferior to St. Jago in this respect.

On the starboard hand in the channel of entrance, the land at the base of the little hills forms a shelf, the margin of which is cliffy throughout; on this side, more than half way in, there is a sunken rock to be avoided; otherwise the passage is clear. At a distance of a few miles the position of the harbour may be readily known by several remarkable mounds of a redish brown colour intermixed with green. The larboard side of the channel is low, and wooded. Agusta river, the *Rio Aqua Anima* of the Spaniards, debouches near to the entrance.

The whole of the level tract through which it runs is intersected with salinas, lakelets, and ponds; and its banks are clothed with the never failing morass mangrove. The timber trees on this level grow to a great size and height, and that singular bird the flamingo abounds on the Savanas, where they may be seen from twenty to fifty or sixty in a line, plodding slowly along in quest of food (aquatic moluses), and frequently stationary for a long time, boring and sifting the soft materials by the aid of the tongue and the bill, (reversed so as to form a sort of scoop) with a degree of patience truly admirable.

At even a short distance, from their great height and red colour, they look like a company of soldiers, sauntering in file to the "Dead march in Saul!" the adjutant and field officers being seen a little on one side: these are the scouts and sentinels, which keep their eyes warily about them to sound the alarum in case of the approach of an enemy. Verily, instinct embraces within its action something more than our acuteness is able to find out. There is no natural phenomenon that has been more puzzling to the ingenuity of the human capacity than this, but although all animals below man may, and probably have, some mode of communicating their—what?—we want a word here—feelings will not exactly suit—shall we say sensations? well then—sensations to one another, yet no one will admit that they can in any degree reason. Unquestionably all—even including the fishes—are capable of being taught the meaning of words, to them mere articulated sounds, which, however, evidently convey to their intelligent faculties (when instructed) that some particular thing is to be executed by them! They possess memory too, and often exercise it in an apparently rational way. Their performances in the mechanical arts are also very astonishing. I have often heard these things remarked as being "very odd" I think them very admirable.

Dennis Murray, midshipman, of the Desire, was sent in the jolly-boat with four lads, to keep watch at the entrance of the harbour.* Whilst amusing himself with the boat-hook, in striking at the little fishes that were enjoying their gambols in the clear fluid over the rocks close to the windward point, a small felucca picaroon came suddenly round it and hauled in for the anchorage. Here was another and more exciting pastime for his leisure. The bang, bang, from her wee instruments of death, quickly called him from his quiet occupation, and instantly roused his mettle. The old ship musket soon warmed with its animated reply—and "now for a dash my lads"—

* He was first to board a vessel coming in, which proved to be a recapture by the ship's tender.

the boats from the ship were seen in the distance eager in the chase. The alarmed and surprised Frenchman had unwittingly thrown himself into a dilemma, and in his endeavour to extricate himself, stuck fast upon the rocks: this was the moment for active display,—it was seized, the boys boarded, drove the Gauls overboard, dashed after them sword in hand, swimming and fighting at the same time, they reached the shore, climed the rocks, now slashing at one another—now pausing to take breath—now again clambering, until the sward was reached. Seven were captured, some escaped into the woods, and two or three were killed. Although a small affair, it was just one of those sudden and casual collisions which requires presence of mind to grapple with; and I think it will be admitted that it was performed with admirable eclât. Dennis was a very funny fellow in his way as most Patlanders are; he afterwards underwent the ordeal of a "downright tropical blow," that is, a hurricane, and its effects, although he was very active during the continuance, "shocked" him so much, that, I have understood, he always afterwards became nervous, whenever a gale began to rise. Apprehension of mischief does not we imagine, imply fear in its strict sense; we believe it possible to dread a thing, without absolutely being a coward. This seems to have been his case, for he was as resolutely brave as the chevalier, *par excellence*, (Bayard.) Indeed we have heard of one of our noted heroes, who would start and become nervous for a moment or two, at the sound of a single gun, but amid the racket of a conflict, was as firm as a rock. It was probably the sudden vibratory undulation of the air, acting upon his nervous system, that created the sympathetic impulse, which ceased, when wound up by a good shaking as it were; however, we must not pretend to a philosophical explanation of these curious anomalies. Antipathies are equally strange—the sight of a snake, or even a cat, has turned a courageous man pale, and set him in tremours, and the most thorough fire-eating Jack that ever boarded a vessel, or stormed a fort, would shrink like the most timid maiden, before an apparition conjured up by his imagination, or which his fancy had worked up into an immaterial being, from some tangible object opposed to his phantasmagoric eye. Truly mankind are a surprisingly marvellous race of beings—"you cant quite fathom their nater," as old Pipes, said, when he saw a baboon drink grog out of a glass, first, (as he thought,) nodding his head, as much as to say, "my service to you cousin!"*

The coast from Cape Maiz to Cape Cruz, runs nearly on a straight line, about 270 miles east and west. In its broadest part here, from the Rio Torquino on the south shore, to Punta Matanillas, on the north, it is 114 miles across. From the sea, the whole coast appears in its primitive state, nothing like cultivation meeting the view as you sail along; and it is very thinly inhabited. In the hands of our industrious countrymen, if they could obtain suitable labourers, it would soon wear another aspect. It is presumable that the Spaniards of the Peninsula, at this time, are not so redundant a nation as the Britons are, or they would not, having so few foreign colonies left, allow this fine and extensive island, to remain in the present unprofitable condition. In days

* I give the Boatswain's own account of the fact.

past, they certainly took the lead in spreading their name, institutions, religion, and language, over the habitable world; and the amount of persons thus distributed by, and severed from the mother country, may, perhaps, exceed even those of our prolific little island.

What the ultimate fate of this devoted land to slavery will be, it is hard to say: but, if the recent attempts at insurrection by the negro population—which is considerably greater in number to the whites, than in any other European settlement, can be taken as a sign of what the future will develope, we may not, perhaps, be far wrong in predicting that it will become a second Hayti, should emancipation be much longer delayed.

Whatever the Dons may think, it is highly probable, that, for every individual African which they import, one shackle of the chain which has so long bound his sable brethren in bondage, is struck off. And it would appear that the now free denizens of the opposite coast, (of Jamaica,) have an eye steadily fixed on those of their race, requiring aid in Cuba; and indeed, if the accounts can be relied on, have already given an earnest that, it shall not be their fault if the others are not released from the yoke.

The justice of releasing *all* those human beings in a state of bondage to freedom, has assumed such an imposing aspect that, the folly of those people who still resist its voice, can only be likened to the perversity of a drunken man, who, deaf to reason, pursues blindly a course which leads either to a fearful maiming of his person, or to destruction.

England, which the rest of the world taunted with aspiring to be its arbiter, uninfluenced by aught but the conviction of performing a righteous duty, has set the example. In a momentous and highly impressive act, as this of her's assuredly has been, we are not, in forming an opinion of it, to stop and enquire into minute details, whether the condition of those she has freed, has been, or eventually will be, bettered. The act has nothing to do with eventuality, that must rest upon the cast of the future, and the disposition of the emancipated. Whether the result may turn out for evil or for good, it can have no relation, we say, to the act; which, as an abstract principle was a return made for an unjust wrong inflicted; and, in fulfilling it she has shown a magnanimity beyond all praise; and, in the award, the power which ruled has at least, all admit, crowned itself with a never-fading wreath of laurel.

It is one of those irresistible events springing from revolution in national opinion, of which the history of the world teems with instances, that once firmly fixed in the mind, no moral or physical obstacle can arrest. It is spreading far and wide, and in the due course of time will be felt and respected in the uttermost corner of the earth where life exists. Let the French and other nations, but especially our transatlantic friend, and the Russ look to it; and be wise whilst yet wisdom can avail in averting the tempest that is lowering around them, and which, if not propitiated may shake their power to its foundation. So at least the plain undisguised voice of reason proclaims.

St. Jago is about thirty-six miles to leeward or westward of Cumberland harbour; it was one of the chief ports resorted to by the privateers with their prizes, on account of its great security from storms, and

from the surprises of an enemy; the entrance, which is narrow, being well defended by a morro castle, and other fortifications. Between this place and Cape Cruz, which terminates this line of the coast, there are several inlets and rivers, which afford shelter, but are little known to us. Aback of the coast, there are some mountains of considerable elevation, particularly the Sierra de Cobre, and those of Tarquino, which latter is sometimes visible from Jamaica, on a clear evening, at a distance little short of an hundred miles. Cape Cruz is noted as the place where H.M.S. Phœnix was wrecked during the furious storm of 1780, and which event gave rise to the characteristic letter of Lieut. Archer; an epistle which has become useful, after a lapse of sixty years, in a way little dreamed of by the gallant writer when he penned it. The utility, therefore, of recording facts and opinions on matters relating to the phenomena of the ocean, can have no stronger proof than the preservation of this officer's simple, but valuable, narrative to his mother, of what he saw and felt, under very trying and awful circumstances.

Immediately to the westward of Cape Cruz, there is a deep formed inlet, called the Bight of Bayamo. In this armlet of the sea, there are a series of sand banks, with little water over them, but having deeps, or channels, which are navigable for small vessels, and studded with a a great number of islets and cays, clothed with shrubs and bushes, in the beaches of which, the turtle deposits her eggs. Collectively, the Spaniards have named them the "Jardin de la Reyna," upon what account does not appear very clear,

The Boca Grande, through which we have passed, is probably so termed, from being rather wider, and more easy of access than the other passages; after threading your way for about forty miles, you enter into the internal channel, and may sail with less difficulty, parallel with the shore, all the way down to the harbour of Trinidad.* The navigation among these banks is rather critical, and requires the utmost caution, even in those who are familiar with it, the vessel being anchored always before sunset, and weighing after sunrise. The water being in general smooth, the reefs do not always show themselves, and the lurking rocks can only be distinguished from the mast-head while the sun shines. The whole arenaceous area with its watery lanes and alleys, its sand-bores, verdant cargoes, its coral patches and lines, the stillness of the white water, and the blue tops of the mountains in the distance, is just such a haunt as accords with the feelings and pursuits of the buccaneering privateer's man, or the lawless pirate, as well as with the avocation of the professed turtler, or wrecker. During the war, it often proved a secure retreat to the fugitive picaroons, when chased by our men-of-war. If they once got within the cays, it became a difficult matter to ferret them out. Hard pressed, they would run the hazard of "working Tom Coxe's traverse" through the shallow trough's, with an inch or two more water than the vessel drew, well knowing that if the boats followed, they were sure to stick fast, or get ripped by the stag's horns, (coral,) every five minutes or so; and the delay thus repeatedly occurring, would afford ample time to the fugitive to

* About 170 miles further to the westward.

reach the internal deep water, when with a flowing sheet she would speedily be out of sight. I was so interested in the navigation, which lasted several days, that my shackles sat very light upon me for the time, (I was a prisoner of war.)

There were few of our officers that even knew how to distinguish one Boca from another; and as there are no guides that can at all assist the judgment, if we except the cays and reefs (when they break,) it would require many days close attention and examination, before a tolerably clear idea could be formed of the Queen's gardens. The only Englishmen that are familiar with the banks and passages, are the Caymanians, and a few turtlers from Montego Bay, and some of the other parts of the north side of Jamaica, to the westward. These peaceable rovers are firmly persuaded, that one of the cays is haunted, the ghost having been seen hundreds of times, keeping his solitary vigils round and round its sandy margin, with the rapidity of an eagle, and the noiselessness of an owl. It was probably the haunt of birds of the latter species, or some night feeding aquatic fowl of a white colour. I did not see the spectre of the Cay, but I recollect whenin durance on board of the Spanish schooner, whilst at anchor between the Cayos de Cavillones, and Los Hermanos, we suddenly saw an object which surprised me quite as much as the airy sentinel of the Boca grande would have done; it was an English man-of-war's launch with about sixteen lusty rowers, and an officer. She popped from among the mangroves of one of the cays, in an instant, not far from the schooner, the whole nearly of whose crew were fast asleep, I sprang upon the taff-rail, and waved my "deputy straw," (my beaver having been purloined by the Ladrones), and involuntarily called out; "What cheer, O?" to my brother officer. He shook his head, and pointed to the offing, I understood, at once, the motion meant "not strong enough, ship in the offing,"* and I then sank into melancholy again. It was precisely one of those superlatively exciting moments, electrifying, though evanescent as the flash from the blue vault, that leaves no time for reflection in the performance of a rash impulse. I think, had the boat been a little nearer, I should have sprang overboard at all hazards. The Maltese boatswain shoved his herculean frame between me and the crew's resentment; as it was, my keepers were in mighty wrath; but I heeded not the "Cara de pocos amigos," the darkness of disappointed hope having blinded me effectually.

The appearance of such an object was so unexpected, and the enemy's crew so unprepared for an encounter, that had the English boat been well armed, it is not at all improbable the schooner would have been carried; as from what the Frenchmen told me, the Creole Spaniards, who formed the bulk of the crew, could not be relied on; and upon a sudden attack, would have jumped overboard, and hid themselves in the bushes of the cay, which was only a few fathoms from the vessel.

If I could have coaxed a tear, I believe I should have "piped the eye," like a little boy disappointed of his sugar-plum, from very chagrin. During the course of my chequered life, I do not recollect that

* I subsequently got on board this ship. I was correct,—the boat was nearly unarmed, not expecting to meet with an armed vessel—she was wooding.

ever my whole soul rushed with such rapidity towards the seat of thought, and lit up the "Aladdin lamps" with the brilliant light of hope, or that any sight upon water has roused so instantaneously the emotions of the heart from a quiescent state; or that expectation was more extravagantly entertained than on this occasion. The peculiar situation in which I happened to be placed at the time—a prisoner of war, in the hands of a ruthless body of desperadoes, the unexpected incident, the buoyancy of youthful spirits, ever eager to overreach the dictates of sober reason, the romantic spot, the silence, the calm repose of the ferocious crew, and the apparent certain chance of liberty, if sufficiently considered by the reader, will clearly explain to him the effect produced upon the captive Mid. Stripling as I was, I fancied that I felt the power of the giant, and thought—a vain absurdity it was—I was then a match for at least half-a dozen of the rusty-brown jacketed fellows snoring around me, my *puissant* courage, as I felt, verging upon ferocity! However, in a short moment—how fleeting to my wishes, hopes and expectations, may be easily conceived—it had lost its expansibility, and rapidly contracted to a very small point. And I now began to be sensible how insignificant a stripling's arm was, in the estimation of the half-savage beings, when the "steam of their blood-thirsty passion was heated to its high pressure." When the boat was out of sight, they turned and scowled their flashing eyes, with every apparent disposition to give me a *carta de pago* in full, for the exertion I had made. Prior to this, I had always the compliment paid me of being helped first, out of their execrable porridge of rice, oil, and garlic; I was now neglected, except by the boatswain, who was my friend to the last, and my trunks were entirely emptied of their contents; the only explanation I obtained (redress was out of the question was,) "sarvey your turn, sarvey mine!"

I may here give a brief outline of the conduct pursued in the privateer, after she had made her capture off Black river. Their first consideration now being to keep clear of the men-of-war, the moment the sea breeze set in, they bore round off to the southward, until out of sight of land, when they gradually hauled upon the starboard tack, midway between the west end of Jamaica, and the Caymans. The moment a sail was seen, they altered the course to avoid her, being quite satisfied with the capture they had made. We sighted three square-rigged vessels to windward, and upon each occasion, the bustle, and buzz of voices of the unruly crew, were such as to show plainly, that anxiety for their own safety was uppermost in their minds, and alertness to obey the orders of their officers, was displayed only at such times. Upon ordinary occasions, when they were free from immediate apprehension, their annoying garrulity, and insubordination, even to the drawing of knives, went on without check, and it became sufficiently apparent to me, that the authority of the superiors was only respected, when danger forced them into a spirit of submission. I here speak of the Spanish part of the crew, who were the majority; the French men-of-war's men, about thirty, were well behaved men. The decks were scarcely large enough to contain their number, and it was difficult to find an opportunity to stretch one's limbs, in so crowded a space.

I generally ensconced myself on the leeward side, under the eddy of the mainsail, as the coolest spot; but even there I was almost baked

into a mummy by the heat, which from the light winds we experienced, was scarcely supportable. In this position, whilst seeking to obtain a mitigation of the powerful blaze of the unobstructed rays of the sun, which shot down in vertical streams with the fierceness of a furnace, I had to endure an evil of an another sort: the fume of the tobacco smoke might have been bearable, had it not been mixed up with the insufferable "hogo of garlic," the odour of which was so penetrating, that everything absorbed and retained it. The vessel was literally surrounded by an atmosphere redolent of these perfumes, to the olfactories of the Gallic and Espanalian Tribes, delicious, which from a want of activity in the air, was carried along with her, as she slowly advanced on her course. Travellers talk of the phlegmetic Dutchman, and the taciturn, methodical Mussulman, as being the most inveterate smokers in the world. The Creolean Spaniard is, however, equal, if he does not surpass them, in the constancy of that practice. In this vessel there was no cessation, all who were awake, night and day, beguiled the time with the cigar; and I have often laughed at the sight of some of these swarthy barbaros with the weed-roll stuck in their mouths, when they were sound asleep. The Capitan was a mere skeleton, a white-headed octogenarian, who hailed for Italy—the land of the renowned adventurer, who to Castile and Leon gave a new world—but by what freak of fortune he was conducted to this remote stage of the drama enacting, I did not learn. I never met with a milder or quieter being, or one, who, apparently, was so little suited for the station he held; when a younger man, he may have possessed life and activity, but at this time he had the appearance of one whose entire energies had departed with the vigour of his frame. Nevertheless, he may have still retained sufficient mental quickness, so as not altogether to forget the lessons experience had taught him; for he had a voice, of course, in council, and I suspect from the wariness always observed, that his motto was, *cavendo tutus*, (secure by caution,)* and that the wise measures emanated from him. With respect to the practical duty, he was nominally the commander, by his own appointment, as being the principal owner of the vessel; and no doubt in maturing his plans, he calculated, like Yorick with his affections, that, "where there is risk, there may be loss."

In his deputy, or second captain, Jean Marie, a Frenchman, he had a competent executive officer, a very superior man altogether, to be found in such a station. Misfortune, he assured me, had driven him to follow a life which was not congenial to his feelings. In his manner he was almost as mild as the aged chief, but he possessed a good deal of firmness and resolution, when occasion called for the display of these qualities, yet I saw that it was a difficult matter for him to control the unruly spirit of his followers.

But the life and soul of the crew, was the Maltese Boatswain, a swarthy, herculean framed matelot, the sound of whose voice, like oil poured upon agitated waves, had the instant effect of pacifying the turbulence of the subordinate, or rather insubordinate multitude into stillness.

I never felt the conviction of the necessity for a well defined system of discipline among a large body of men, more than during my con-

* This seems to have been confirmed, as shortly after, he gave up the charge, the schooner was captured by Lieut. Boyd, and Mr. Watt, mate, in two of H.M. schooners, after an action.

strained sojourn in this craft; or the truth, if I had not long been convinced of it, how essential it is for every individual's benefit, that reasonable restraint should be enforced with firmness, under proper discretion. It is in human nature to be free, the desire is strong in all, but especially in Englishmen, who have the satisfaction of enjoying life under wholesome institutions, which is more than can be said for other people; but even in their case, this desire can only be consummated to the production of happiness, by being kept under a systematic easy restraint, to prevent its degeneracy into licentiousness, from the proneness of the being, if left to his own uncontrolled will, to fall into error by committing violence.

After entering among the cays, and whilst threading their way through the channels, the crew paid instant attention to the orders of the officers, but on anchoring for the night, all restraint was removed, and the carousal began, and was kept up to a late hour.

We have stated Cape Cruz to be the western extreme of the line of the Cuba coast, opposite to Jamaica; Bayano, which lies in the elbow of the bight of that name, at least ninety miles from the open sea, was a snug nestling place for the picaroons, (the town, we believe is called Mansinella, or more properly, Manzanillo, from the number of Mangineel trees growing there.) Some of our boats, and small vessels of war, made attempts to bring them out. Since the peace, the pirates have succeeded the privateersmen of the war, in their audacious calling, which seems to be an art very congenial to the disposition of the Cuba *hombre de mar*.

Between Manzanillo and the port of Trinidad, the coast trends irregularly to the west, north-westward, for the distance of two hundred miles; and on this line there are many small rivers, creeks, and coves; breasted by banks and cays, between which and the Jardin de la Reyna, there is a navigable channel. The harbour of Trinidad is small, and is open to the eastward. I made a rough sketch of it, and put down the soundings whilst beating in and out, of which I gave a copy to some of the naval captains who were likely to be stationed off it, considering that it might be of use in boat attacks. In the ship I afterwards served in, every preparation was made for bringing the vessels out of the harbour, and taking the city, a few miles inland, but on the very day of of the night the enterprise was to be attempted, we chased and boarded a Spanish packet from Cadiz, having on board despatches, announcing the peace with Spain. This put an end to a promise I had made to the Comandante de la Marina, that I would pay him a visit in another character than that of a prisoniero. He was a fine, jolly, good-tempered, liberal-minded officer, and treated me with as much kindness and humanity, as his authority would allow him to exercise.

(To be continued.)

The Rudder.

Our last number contains an interesting extract, giving a description of the seal of the Lord High Admiral, in 1471, belonging to King Richard the third,* when he held that office, before he ascended the throne; and we have now before us a no less interesting specimen of earlier date, in the invention of the rudder, for which we are indebted to the author of the History of Gravesend. As a book abounding in antiquarian research, rich in curious historical facts of early times, and (Gravesend or "Gravesham" being a maritime town,) full of interesting nautical details, which closely concern naval men, we have seldom met with a work more to our mind, or one that we can assure our readers they will much enjoy the perusal of, than the History of Gravesend.† We promise ourselves another extract or two, besides the present, on nautical matters from it, connected with the Thames and the royal navy, which may possibly induce attention to it, but the following, shewing the early application of the rudder, every intelligent seaman will delight in.

The rudder is said to have been used in the fourteenth century, but the authorities referred to, would place the invention at the close of the fourteenth, or at the beginning of the fifteenth century.

It is proposed now to show that it was in use in the year 1340. The invention of the mariner's compass must have encouraged a more adventurous system of navigation, and have led to the construction of larger vessels than had previously been in use; and when the *clavus* had been found inadequate to guide large and heavy vessels in boisterous seas, with precision, in the course indicated by the compass, a more efficient instrument would be sought, and the rudder was produced.

It appears that among the ships collected at Sluys, in the year 1340, were nineteen of unusual magnitude, belonging to the Genoese; and it was at that time that a rudder was introduced at the stern of vessels. The proof of this is displayed on the gold nobles coined by Edward III.

Snelling mentions‡ three varieties of them, one of which he says was struck in the eighteenth year of the reign of that King; another in his twentieth year, which differed from the former, only in having the letter E at the intersection of the cross; on the reverse, the first having the letter L; and the third, he says, was coined in the twenty-seventh of the King, and has the addition of a streamer, bearing the cross of St. George. Ruding, describing these nobles, says,§ that "at this period, the gold coins of other nations were denominated either from the place of mintage, or from the devices impressed upon them; but these coins seem to have derived their name from the noble nature of the metal of which they were composed. It is, indeed, extraordinary

* From the life of Richard the third, as Duke of Gloucester and King of England, by Miss C. A. Halsted; 2 vols, 8vo. Longmans, London.

† The History of Gravesend, in the county of Kent, and the port of London, by Robert Pierce Cruden. London, W. Pickering, 177, Piccadilly; James Johnston, 46, Harmer Street, Gravesend. 1843.

‡ Snelling on the Coins of Great Britain. Gold Coin, p. 3.

§ Ruding's Annals of the Coinage, vol. i. p. 422.

that they were not rather entitled from the newa nd singular type of a ship, with which they are impressed, and thus remarkably distinguished from every other coin then existing." He concludes with an opinion, that they were struck in commemoration of the signal naval victory, in the year 1340, at Sluys.

This attention to historical facts, which might lead to the knowledge of the date of the coins, is perhaps as much as should be expected in the numismatic works referred to; but there is another authority, from which more precision, in the technical description of the vessel represented in the coin, might have been looked for. Charnock,* with reference to the plan of marine architecture in the middle ages, describes the vessel impressed on the noble at great length; and although he notices the forms of the stems and prows represented in that type, he does not notice a rudder at the stern,

Selden† also, mentions this coin, and gives an engraving of it; yet he too has omitted "the one thing needful" to make it a faithful resemblance of the vessel.

It is matter of great astonishment, that all these writers should have overlooked that most important feature of the coin, which marks a great epoch in the history of naval architecture; but such is the fact, as the following representation of the coin‡ well demonstrate.

Here is the earliest notice, yet discovered, of a rudder affixed to the stern of a vessel. In a well preserved impression of this noble, not only the rudder is shown, but the gudgeon and pintles by which it is secured to the stern, are very distinct.

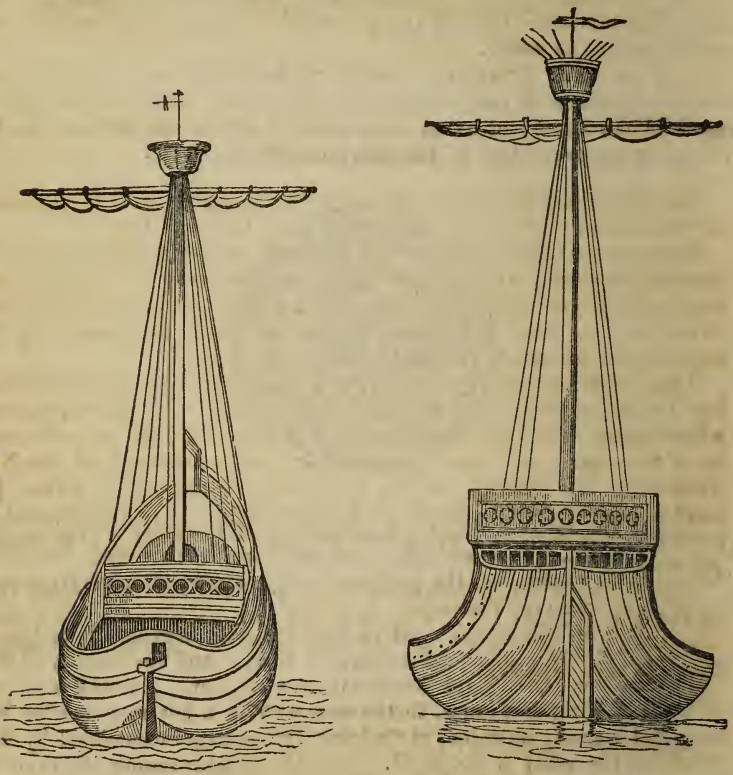
The date of this curious and inestimable coin, is generally assigned to the period of the great achievement at Sluys; and the display of the royal arms upon the shield justifies this conclusion. Edward adopted the style of King of France, in the year 1337,§ a few months after his navy had signally avenged, at Cadsant, the outrages committed by the enemy on the coast of England. He did not also assume the arms of France at that time, and he soon laid the title aside; but in the year 1340, he assumed both the style and the arms, in pursuance of a treaty with the Lords of Flanders, and the burgesses of the chief cities, which

* Charnock's History of Marine Architecture, vol. i. p. 343.
† Seldeni Mare Clausum. Londini, 1635.
‡ From a very fine specimen of this coin, in the author's possession.
§ Barnes, p. 118.

was ratified at Ghent* on the 23rd of January, 1340. Hence, nobles are presumed to have been struck in honour of the great naval victory, under the command of the King in person, at Sluys in the same year. This places the invention of the rudder, before the middle of the fourteenth century.

The proof produced, in support of the opinion referred to, in a preceding page, that the rudder was introduced in the fourteenth century, is contained in an illustrated manuscript copy of the chronicles of Froissart; but it is generally believed that there is no such copy, of an earlier period than the close of the fourteenth, or the beginning of the fifteenth century; and as the chronicles extend to the year 1399, this opinion rests on a safe foundation, and is confirmed by the intrinsic testimony of the manuscripts themselves.

The following are copies of the illustrations referred to.

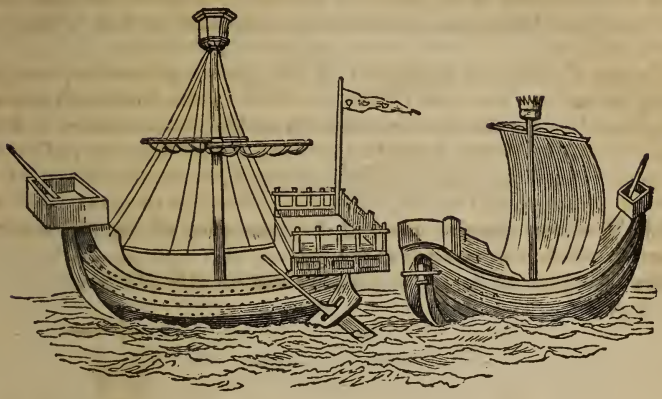


FROM ILLUSTRATED MANUSCRIPT COPIES OF FROISSART'S CHRONICLES, BRITISH MUSEUM, HARL. MSS. 4378, 4380.

In another highly embellished manuscript of the same period, two vessels are separately represented, as they are here given together; one having the ancient *clavus*, and the other a rudder at the stern, which

* Barnes, p. 154.

seems to mark the time when the latter had been introduced, and the former had not been entirely laid aside.



FROM L'HISTOIRE D'ALEXANDRE LE GRAND, ROYAL MS. 29, B. XX., IN BRITISH MUSEUM.

The illustrious Wicliff had the *clavus** in his mind, when he produced his translation of the Holy Scriptures about the year 1381.

The relation of the shipwreck of St. Paul describes similar means of steering the vessel, although the proof lies hidden in the English version,—"and when they had taken up the anchors, they committed themselves into the sea, and loosed the rudder-bands, and hoisted up the main-sail to the wind, and made toward the shore."

This rendering conveys an idea of *a rudder* of modern construction, but in the original "the *bands* of the *rudders*"† is the expression; which agrees with the representation of a governing oar on each quarter of the vessel: and this is preserved in the translation‡ of the New Testament, by Wicliff, in the fourteenth century;—"t wahne þei hadden take vp þe ankeris þei bitokē hem to þ see t slakidē togidir þe jointours of gouernails t wiþ a litil seil left vp bi blowyng of þe wynde þei wente to þe bank."

The rudder is recognised in an elegy upon the death of Edward III., on the 21st of June, 1377, written at the time, from which the following passages are extracted, as both curious and pertinent to the subject that has been discussed.

Sum tyme an English schip we had,
  Nobel hit was and heih of tour,
Thorw all Christendam hit was drad,
  And stif wolde stande in uch an stour
And best dorst byde a scharp schour
  And other stormes smale and grete:
Now is that schip that bar the fiour,
  Selden seȝe and sone forȝete.

* Clavus.—The distinction between the Remus and the Clavus is, that the former is the common oar, and the clavus was formed upon the same plan, but with greater power, and was used in like manner for governing the course of the vessel.

† Laxatis vinculis gubernaculorum. ‡ Preserved in the British Museum.

Into that schip ther longed a *Roothur*
That steered the schip aud governed hit;
In al this world nis such a nothur
As me thinketh it my wit.
Whyl schip and *Rother* togeder was knit,
Thei dredde nouther tempest driyge nor wete;
Nou be thei both in synder flit,
That selden seyg in some forgete.
* * * * * * *
The *Routher* was nouther Ok ne Elm,
Hit was Edward the thridde, the noble Kniht;
The Prince his Sone, bar up his helm,
That never 'sconfited was in fiht.*

This affords no decisive proof of the time when the rudder was first in use, but such a metaphorical flourish in that age, may be supposed to have been elicited by the importance and novelty of the invention of that machine.

Nautical Mems.

The following remarks on various nautical subjects were given to me as having been written by a clever naval officer, whose name however I do not recollect. I shall leave the reader to make his own comments.

1. *Jury Compass.*—If several needles, rubbed with a magnet, be stuck together with their points one way, through a very small bit of cork, and floated in a basin of water, they will move to the magnetic meridian, their points turning to the south.

2. *The Rudder.*—Forty-five degrees is the most advantageous position for a ship's rudder to act; but as the water strikes the rudder in proportion to the *run* of the ship, so the tiller will have a less angle with the keel: for supposing the spread of the run to be 20°, the half, or 10°, will be the angle which the water makes with the keel, when thrown out of its direction towards the bow; therefore, for the rudder to be struck, at a mean, by the water with an angle of 45° the tiller must move over to an angle of 35°.

3. *Tacking.*—If the mainsail be hauled before the wind comes ahead the main yard will fly round of itself, but if it be not hauled until the wind comes ahead, or on the other bow, it will occasion a very dead haul.

Never brace to the head yards in tacking, unless absolutely necessary to prevent the ship from going on shore, or when she has no head way, to come round of herself.

4. *On Sailing.*—When the wind is upon, or before the beam, if the yards be so braced that the angles between them and the wind may be a point and three-quarters greater than the angles formed by the yards, and the ship's head, that point will produce the greatest head-way.

(To be continued.)

* Vernon MS., Bodleian Library, Oxford. Archæologia, vol. xviii. p. 22.

THE ANCHOR.—We have more than once recorded the opinions of naval officers and other experienced seamen, on Lieut. Rodger's Small-Palmed Anchors, and his Pickaxe Kedges; but at no former period have we had higher satisfaction in pointing out their great merits in this journal, than on the present occasion.

From their first appearance about ten years ago, our firm conviction was that the inventor had made a very judicious, and, we may now add, successful deviation from the old established anchor with the huge palms, and on that ground we considered it our duty to give him all the support we could, knowing that we should thus be rendering an essential service to ships and seamen. A few months subsequent experience in the year 1839, while serving in the late unfortunate Fairy, confirmed our opinions.

We have therefore continued strenuously to recommend these anchors to the present time; and are gratified to find that our efforts have, in some degree been instrumental in making a good thing extensively known; for we consider it utterly impossible that any practical seaman can read the following letters, without being completely satisfied with the correctness of our judgment. The facts which they relate are of so convincing a nature, and the officers by whom they are related are so well known to many of our readers, that no comment of ours is required. We may however congratulate Lieut. Rodger on the complete success of his invention, and we confidently hope that the triumphant results detailed in these letters may lead, (as we are convinced they must do,) to an extension of the patronage which his anchors and kedges have already received in her Majesty's Navy, and eventually secure their general adoption.

Admiralty, 3rd September, 1844.

SIR.—I am commanded by my Lords Commissioners of the Admiralty to send you herewith, an abstract of a statement from the Commander of the *Cyclops* of the result of trials he has made of two of your Anchors supplied to that ship.

I am, &c.,

JOHN BARROW.

To Lieut. Rodger, R.N.,
Shawfield Street, King's Road, Chelsea.

On the 14th February, Lieut. Rodger's 3 cwt. Pick Axe Kedge Anchor was laid out by a 9-inch hawser, 90 fathoms, for mooring ship. A heavy strain was brought on it by laying out 80 fathoms of small bower chain and best bower let go, the kedge not having started the least. Eleven men had great difficulty in weighing it, from holding better than the old one.

Lieutenant Rodger's anchor of 33 cwt. has been in use since the *Cyclops* left Woolwich in December 1843, and I have every reason to be highly satisfied with its properties, having tried it in heavy weather, and at times with a short scope, considering it a better holding anchor than the one in general use.

Admiralty, 13th September, 1844.

SIR.—In pursuance of the directions of the Lords Commissioners of the Admiralty, I enclose for your information a copy of a letter received from Capt. Hope, of H.M.S. *Thalia,* respecting the anchors of your construction, supplied to that ship.

I am, &c.

JAMES MEEK,
For Store-keeper General.

Lieut. Rodger, R.N.
Shawfield Street, Chelsea.

H.M.S. Thalia, 15th March, 1844.
Lat. 8° 45′ S., long. 92° 31′ E.

Sir.—I have the honor to acquaint you for the information of the Lords Commissioners of the Admiralty, that as it is very nearly two years since I made a report on the merits of Lieut. Rodger's Bower Anchor, and could not then do more than just allude to his Stream and Kedge Anchors, as I had not had an opportunity of trying either of them, I shall now take leave to give their Lordships a further report upon the first, and also to state my opinion of the two latter.

In my communication of the 27th April, 1842, I gave their Lordships an account of the severe test Lieut. Rodger's Bower Anchor was put to in Simons Bay, in a strong south-easter, when H.M. Ship under my command rode out the gale with only 84 fathoms of cable out on that anchor, though the *Sapphire* troop-ship, was hanging on to the *Thalia* by the stream cable of the latter. It is true both ships had an anchor *under foot* but neither could veer a fathom, or the *Sapphire* would have been again foul of the *Belleisle*, nearly the whole weight and strain of both ships consequently came on Lieut Rodger's Bower Anchor. I have now to observe that I have always used it as our working Bower Anchor, and have invariably placed the greatest confidence in it, in every variety of bottom the *Thalia* has yet anchored in. Although it has not been again so severely tested as it was in Simons Bay, it has stood its ground admirably, in several gales and tremendous sudden squalls, at Chusan, Hong-Kong, and Madras.

The very circumstance of my always having made it our working anchor, must, I should think, be a convincing proof to their Lordships of the very high opinion I have formed of it.

I now beg to state that I constantly used Lieut. Rodger's large stream or coasting anchor, made in the shape of a pickaxe, for the night, or for a tide, in the straits of Sunda, Banca, Sincapore, and Malacca, and also in the China seas, and found it most convenient, as a watch can weigh it, generally speaking, with perfect ease. It has also the advantage of being of a size, and weight, which can be used either with a bower or stream cable. I first used it with the former in the Straits of Banca, in consequence of its holding on so admirably, that I was actually afraid of carrying away the stream cable, in weighing it. It is, in my humble opinion, a most useful and valuable anchor for a ship to have, for as it is just half the weight of the *Thalia's* bower anchors, it can be laid out with perfect ease in the launch, in the event of a ship getting on shore, and I am persuaded from what I have seen of it, that it would, generally speaking, in such a case, answer all the purpose of a bower anchor, with the very great advantage of being carried out in a much shorter space of time, and with far greater facility, than could be accomplished, even in the finest weather, with the latter. As it weighs rather more than 24 cwt., and the proper stream anchor for this ship is only 13 cwt., this ship, in most cases, might be hove off by it, when the other stream would not be heavy enough, and when it might be almost, if not quite impossible to lay out a bower anchor. I must, however, remark that, according to its present dimensions, it is sometimes very difficult to fish and stow; this arises from the great length of the shank and stock, and also of the ring. I have consequently recommended Lieut. Rodger to shorten it in these three particulars, and the pickaxe part likewise, in proportion; but to keep the anchor and the stock as near as possible the same weight, by giving them in substance, what is taken off in length.* As it is now constructed, I should say that the shank and stock, indeed the pickaxe part also, are too slender for their great length, but, notwithstanding all this, I have much confidence in it, as it is at present made. I may add, that I put Lieut. Rodger's stream anchor to a most severe trial at Chusan, in securing a large stranded junk, laden with copper

* The pickaxe anchors have been made somewhat shorter, and consequently stronger, ever since the latter part of 1842.—Ed.

money, to the shore. As she was just on the very edge of a steep mud bank, it was necessary to have many fastenings to the shore. Among others, I had the *Endymion's* stream anchor, being larger than the *Thalia's* government one of the same description, and thought I had taken every necessary precaution. In the middle of the night, however, as the tide fell, she slipped some way off the bank, and dragged the anchors, and snapped two enormous spars in two. Next day, I substituted Lieut. Rodger's stream anchor for the *Endymion's*, and at high water hauled her on the edge of the bank again, which had the desired effect, and was the cause of my being able to save many thousand pounds, though all in copper coin of prize money for the combined expedition.

Had I not been provided with Lieut. Rodger's Stream or Coasting Anchor, I must have used one of the *Thalia's* Bowers, which would have been attended with just double the labour.

I come now to Lieut. Rodger's Kedge Anchor. This is likewise made on the Pickaxe principle, and though 5 cwt. less than the Government *Stream* Anchor of this ship, I feel confident it would hold on just as long. I had an excellent opportunity of trying this Kedge when the *Thalia* got entangled among the rocks and shoals in Howtao Bay, near Amoy, and was four days in warping out owing to the wind being right in, and blowing very fresh. I warped her out with the six-inch hawsers attached to Lieut. Rodger's Kedge Anchor, having the yards pointed to the wind, and the top-gallant-masts struck, one of the days it was blowing so strong. One great advantage of this Kedge is that this ship's Pinnace can carry it and weigh it with great ease. If I had not possessed it upon that occasion, I must have laid out the Government Stream Anchor, and must have hoisted the launch out, to transport and weigh it, as neither of the ship's proper kedges would have been large enough in such weather as we experienced.

Some months after this at Chusan, an American ship of about 500 tons, got on shore in coming into harbour when it was blowing very fresh. I immediately sent Rodger's Kedge to him, with our six-inch hawsers, and laid it out, and though it was blowing so fresh I had the ship afloat again, and in deep water, in a very short space of time. In that weather nothing short of the Government Stream Anchor would have got her out of the scrape, if I had not had the admirable kedge of Lieut. Rodger.

I am decidedly of opinion that Stream and Kedge Anchors, made like Lieut. Rodger's in the shape of a pickaxe, will hold on very much longer than those of the usual construction and of the same weight.

After all I have thus minutely stated with regard to all three of Lieut. Rodger's anchors, which their lordship's put on board the *Thalia* for me to try, and report upon, I need scarcely add in conclusion, that in every variety of ground, I have as yet had an opportunity of using them in, I have the highest opinion of them, and which has been formed after much experience, during the twenty-seven months they have been on board her Majesty's ship under my command.

I have the honor to be, &c.

CHARLES HOPE, *Captain.*

The Hon. Sydney Herbert, M.P.

With reference to the first part of the foregoing most satisfactory and seaman-like report, we may now, by way of explanation, lay before our readers an extract from a letter received two years ago by Lieut. Rodger, from Capt. Hope, dated H.M.S. *Thalia*, April 26th, 1842, off Java Head.

I am happy to say we had an opportunity of putting your Bower Anchor upon a most severe trial at the Cape, and the result was most satisfactory.

We were detained at single anchor in Simons Bay, by a long and heavy south-easter, and on the fourth morning, when lying with top-gallant-masts struck, and 84 fathoms of chain cable out on the Best (*your*) Bower in 10 fathoms water, the *Sapphire* troop ship of 600 tons parted, and drifted into the

hawse, and foul of the *Belleisle*, though the latter veered to the clinch on both cables.

The *Sapphire* had let go another anchor, but was dragging it when she got under the line-of-battle-ship's bows.

I then let go our small bower under foot, and ran out our new hemp stream cable to the *Sapphire*, as we were lying on the larboard bow of the latter, and the *Belleisle*. But, though the gale increased, I saw at once, that to be of any assistance to the *Sapphire*, we could not veer on your bower, and, consequently could not veer on the Small Bower, and could only keep it under foot; for, if I had veered, we should have been abeam of the *Sapphire*, and she could not then have got clear of the *Belleisle*. The *Sapphire* then hove ahead on our stream cable and cleared the line-of-battle-ship, and for the remainder of the gale, 16 hours, hung by, and trusted chiefly to our cable, as she had very little cable out on *her* bower anchor, and did not let go her sheet.

Your Anchor consequently, with only 84 fathoms of chain cable on it, had very nearly the whole weight and strain of both ships on it, amounting to 1700 tons! I say nearly the full weight of both *Thalia* and *Sapphire*, as our Small Bower was only under foot, and she had very little cable out on her Bower Anchor, which she let go after she parted. She could not veer on it or she would have been again under the bows of the *Belleisle*, or at all events foul of her in some way. I could not veer a fathom, for if I had the two troop ships must have been again foul of each other. In the course of the day as it blew a heavy gale, I struck our lower yards and got the top-gallant-masts on deck, and made the *Sapphire* do the same. I had our Sheet Cable ranged and hands by the Anchor, in case your Bower or the chain cable had gone, or in the event of dragging, but it fortunately was not necessary to let it go. It is all *sand* in Simons Bay, and not *very* good holding ground. I have thought it fair to you to report at once to the Admiralty the splendid test we put your Anchor to upon that occasion; indeed we may not have *such another* opportunity of proving its value so long as we are in commission, though I use it as our *working* anchor.

Ripon, April 29th, 1844.

Sir.—Having had some experience of your small-palmed anchor whilst commanding H.M. steam vessel *Volcano*, I consider it but justice to you, to state that I think it perfectly efficient in every sense of the word; and that if I ever again command a ship, I shall make application to have your anchors supplied.

I am, &c.

C. J. Featherstone, *Commander, R.N.*

Lieut. W. Rodger, R.N.

Shingle Beaches.

The following is a series of questions which have arisen from enquiries made by the late Refuge Harbour Commission, and which have been addressed to the officers of the Coast Guard. They are calculated to produce a vast amount of useful and interesting information, which will intimately concern the engineer in maritime works; and with the view of making it generally useful, we hope to be enabled to lay before them in the pages of the *Nautical Magazine* the replies which will be received.

In the evidence recently taken before the Harbour Commission, great difficulty was found in obtaining information with respect to the movement of *Shingle*; which being a subject of much importance, as connected with the pre-

servation of our southern harbours, and not devoid of interest as regards physical geography, the following queries are addressed to the officers of the Coast Guard who are stationed near such shingle beaches, and to any other persons who will watch those movements as closely as their opportunities will allow, and note their observations on paper at the time.

These queries are drawn up on the supposition that the tide streams have but little to do with the movement of the shingle, but that it is chiefly caused by the action of the sea and surf on the beach, according to the prevailing wind.

1. What extent of Shingle beach lies in your district? State also its direction and point of greatest exposure.

2. Do certain winds bring forward the shingle, and heap it up on the beach?

3. Where does it appear to come from: is it thrown up from seaward, or does it arise from the wearing away of the cliffs, and thus only travel along shore?

4. From any peculiarity in the pebbles can the shingle be traced to the source from which it came?

5. Do certain winds cause a scour on the beach, and carry the shingle away:—if so, to what extent, and where does it appear to go to?

6. Does the beach gain on the sea, or the contrary?

7. Does the shingle extend to low water at spring tides, or does a strip of sand intervene between it and the sea?—If the latter, when this sand is dug or bored through, has shingle been found below it, and at what depth?

8. To what height at any particular spot has the beach been known to be raised up in a given space of time?

9. What is the usual size of the pebbles:—do they differ much in different parts of the same beach? Give the exact weight of a cubic foot of them.

10. At the Portland end of the Chesil bank, in Dorsetshire, the stones are as large as a hen's egg, while at its western end, near Abbotsbury, the pebbles are not larger than horse beans:—does this variation occur elsewhere and how may it be accounted for?

11. What is the greatest depth of the shingle at any one place, from actual measurement, and what is its average depth?

12. Can you state certain any increase of shingle within any known time, for instance, from the first laying down a groyne, till that groyne be completely covered, and what is the greatest increase any where in your neighbourhood?

13. The character of the shingle is said to be different in the small bays lying between rocky headlands on the Coast of Cornwall; is it so, or does the shingle pass round such headlands?

14. Could you mark a few cubic feet of shingle by dipping the stones in red lead, or in any adhesive paint, so as to be able to trace its movement, and to recognise it if carried to sea and thrown up again?

15. The beach at Dungeness is marked by ridges and furrows, as if by the waves of the sea, for some distance inland. What is the average distance apart of the ridges there, or in similar situations? How far do they extend laterally from the Ness, or other salient point? What is the distance to the limits of verdure from the sea in a direct line from the projecting point? Can any inhabitant recollect the gale by which one of these ridges was formed?

16. What is the angle of the usual slope of the beach, and does it vary according to the alternations of gales of wind and of fine weather?

17. Does the shingle from the South Foreland gradually decrease in size till it disappears at Shingle End, on the South point of the entrance of the river Stour?

18. Are you aware of any other banks of shingle which are generally covered by water like the Shingles near the Needles, and the Shambles off Portland?

19. Upon the part of the coast where you are stationed, what appears to be the best angle that a groyne should make with the prevailing direction of the wind, in order to collect most shingle or sand?

20. What has been found in practice to be the best construction, and the proper length and height for a groyne?

Officers and others are invited to add any observations which may throw light on this subject, and to address their answers to the Secretary of the Admiralty, with "Shingle Beaches" endorsed on the envelope.

Wrecking at Heligoland.

(From Shipping Gazette.)

Sir.—From the extensive circulation which your valuable journal has amongst all classes connected with maritime affairs of this country and abroad, it will be rendering infinite service to merchants, underwriters, shipowners, and masters of vessels, to caution them against the mal-practice which is carried on in the island of Heligoland with shipwrecked property. The proceedings of the island authorities certainly call for an inquiry by the government; but I regret to say that every effort which has been made to call Lord Stanley's attention to the conduct of the magistrates has hitherto been in vain. I am, however, glad to add that the facts which I have now brought forward to two influential bodies, closely connected with the shipping interest, will convince his lordship, as soon as the matter is brought before the government, of the necessity that some measures must immediately be taken for the better management and security of ship-wrecked property, and to confine the salvage and per centage system now carried on jointly by the Lieutenant-Governor and magistrates within the limits of the law.

It will scarcely be credited when I state to you, that a vessel not more than three years old, the Sophia Elize, Treyber, master, and bound from the Jahde to Hull, got on shore on the island, in March, 1835, and to prevent her being got afloat again, the magistrates ordered her to be sawed into three pieces, and then disposed of her.

On the 17th November, last year, the Sophie, Stehr, master, from Hull for Hamburgh or Altona, was destroyed at the island in a most wanton manner. The proceedings with that vessel and her cargo, I cannot designate otherwise than as an act bordering on piracy. A concise and correct statement with that vessel, will now be brought before the government of this country. She was riding in the north roads of the island, when her chain parted, and, riding by her last anchor, the master hoisted a wheft, the pilots went off. This was about 10 A.M., the master and his crew left her, and landed about 11 A.M. No measures were taken during the day for the safety of the vessel: the next morning her cable had parted, and she had drifted away. Two fishing boats went off to her, and at 3 o'clock P.M. of the same day, the 18th inst., she was again safely moored in the north roads. One half was now claimed from the vessel and cargo as salvage, the salvors kept possession of her, and no arrangement having been come to, she was hauled on the beach on the 25th instant, and her cargo landed with the assistance of the magistrates; this being effected, she was immediately unrigged. This latter act was a direct violation of the 9th section of the Island Strand Laws, for this section provides, that nothing of the inventory of any stranded vessel shall be removed from her, so long as any chance remains to bring her afloat again—and I am ready to prove, that the proceedings of the survey, which did not take place until the 28th, state that she could be got off and sent to sea for about £59. A copy of that document is in my possession; she was nevertheless disposed of by the magistrates to the salvors for about £15. The salvors are not to blame in this, nor in similar cases, but the authorities who connive at it, for the sake of exacting five, or perhaps seven per cent. from such property, and encourage such mal-practices on that account. Another flagrant act of gross imposition was the case of the Mentor, Boon, master, from Trinidad de Cuba for Bremen. This vessel stranded on the 17th Feb. last at Heligoland, and according to Mr. Wendt's statement to me, (Mr. W. is agent for the Bre-

men Insurance,) he had to submit to a valuation of the cargo, and to pay one-third of that valuation as salvage, but, exclusive of this, a bill of about £470 expenses, and about £130 per centage, and fees to the magistrates. This latter is divided beeween the governor and magistrates. With regard to this charge, it is necessary to remark, that when the island surrendered to Great Britain, on the 5th September, 1807, the laws of the island were guaranteed by capitulation, Amongst these laws is the barbarous and inhuman Danish Strand Law, dated Copenhagen, Dec. 30, 1803, I believe long since abolished in Denmark. The 42nd section of that law directs that all shipwrecked property shall be under the charge of the chief officer, consequently in Heligoland, the Lieutenant-Governor; and for his trouble to attend to the proper management of such property, he shall be entitled (according to the 32nd section of that law) to receive 100 rix dollars, or 300 marks, Hamburgh currency; and if the interference of the magistrates becomes necessary, then they shall receive the same remuneration as the Lieut.-Governor. But the magistrates arrogate to themselves the sole management of shipwrecked property, and charge, as I have already stated, usually five—and I have been informed by Mr Jabob Siemens, of Heligoland—even seven per cent, on the whole value of ship and cargo; exclusive of this, the Lieutenant-Governor levies a charge on wrecked vessels for the iron bolts, &c. in such wreck, under the name of "iron money." This may, perhaps, vary from five shillings to £5 or even £20. The magistrates invariably fix the price on wreck for his Excellency, and the amount to be paid to him by the buyer of wreck, is always published before the sale; and since the wreck is, as a matter of course, sold for so much less, it follows that either the underwriter or owner is the sufferer for that sum; for this exaction there is positively no law.

I do not know of any country or place, where the authorities or the government, derive any benefit, or impose any tax on the unfortunate mariner who is driven by stress of weather on their coast, excepting in Heligoland, a place belonging to the greatest commercial and maritime nation in the world. In referring again to the loss of the Mentor, it appears that, according to an account sent by Mr. Jasper Bufe, Lloyd's agent, and inserted in the *Borsenhalle* of the 24th February, No. 9,845, that that gentleman considered the Mentor would become a wreck. In this he was, however, mistaken, for I am informed the Rotterdam underwriters reported on her condition, which report was subsequently fully corroborated by Mr. Wendt, and it affords me satisfaction to be able to state that my report was subsequently fully corroborated by Mr. Wendt, and was acted upon by the underwriters, and the Mentor was subsequently launched; but a salvage had to be paid on her for disturbing the stones on the beach.

Before I close this letter, I must add, that I would most strenuously recommend all masters of vessels, who have the misfortune to get into difficulties near Heligoland, and who find no agent on the spot for their underwriters, not to listen to any proposals from subordinate magistrates, but to see the Lieutenant-Governor for the time being, and to treat with him only, for he is legally the only responsible person.

I regret Sir that this letter will take up such a large space in your columns, and beg to subscribe myself your most obedient servant,

London, Aug. 14th, 1844. J. Groth.

The Gorgon and her Engines.—Mr. Editor.—I observe in the *Athenæum* of the 31st ult. that the engines of Messrs. Seaward are *not approved of!* in a notice of the Quarterly papers on Engineering, in that journal, and the *loss* of the Gorgon is attributed to their disadvantages! What next? It is really a pity that so well-conducted a paper as the *Athenæum* should make itself appear

so ridiculous. No doubt Messrs. Seaward can afford to smile at such absurdity, for facts will speak for themselves.

In the first place, the Gorgon is not lost, which the *Athenæum* does not seem to know, and I have no doubt the efforts of her crew, directed by her enterprising and skilful commander, assisted with those of other men of war, and the whole of General Origa's army will be the means of getting her afloat again, in spite of her being high up on a sandy beach. But Sir, the charge is against the Gorgon's engines "from their infallibility to make headway against the gale," as the *Athenæum* says, and considers it to be a "circumstance disgraceful to every one connected either with the machinery, the hull, or the navigation of the ship—a circumstance unparalleled in a similar class of mercantile vessels—a circumstance only possible with a bad engine and a mismanaged ship." (Pray excuse me, Mr. Editor, for begging of you to quote the above passage, for it is a tissue of the most absurd trash from beginning to end, that was ever produced:) all this, I say, shows how much the writer in the *Athenæum* knew of his subject. He begins by abusing the engines because they are Seaward's, and not to his fancy; he becomes heroically warm, perhaps with the heat of them, finding them too hot for him, next attacks "the hull, or the navigation of the ship," talks of "a similar class of merchant vessels," and winds up his tirade of abuse with declaring the Gorgon as having "a bad engine," and being "an ill-formed and ill-managed ship," and no mistake. Surely the writer must be some cockney who has made a voyage from London Bridge to Gravesend, or even to Margate, and thinks himself another Solon in steam navigation, and naval architecture! Did he ever hear of a Pampero? Not he. Does he know anything of a hurricane? Not he. Did he ever witness the effect of a sea on a vessel? Such perhaps as he has seen between London Bridge and Margate. Did he know that his much-abused Seaward's engine's worked very well during the whole gale? Not he. But he ought to have known such a fact, and might have known it by referring to your last number. Does he know anything of the difficulty of getting a ship's head to the sea in a hurricane? Not he, how could he? But he discovers at length some palliative for the loss of this vessel which *is not lost*, that other *sailing* vessels went ashore at the same time, and he again becomes magniloquent, and exclaims, "Glorious condition of our steam navy!" Poor man! I wonder if he has recovered himself yet of the fit of despair into which he threw himself, when he gave himself up to the gloomy prospect which his overheated and deceptive imagination had conjured up before him. Messrs. Seaward may well afford to smile at such ignorance. Let him live and learn they may say, for this he has much to do, but the experience which he wants is not to be gained in the columns of the *Athenæum*, and before he pretends to write in them again, he had better go and look for it.

I am, &c. HIRAM.

PLYMOUTH SAILING REGATTA, *on Prince Albert's Birthday.*

The members of the "Royal Western Yacht Squadron of England," whose head-quarters and most comfortable club-house are at Plymouth, and a list of whose vessels appeared in the last number of the *Nautical*, p. 572, held the first day of their Annual Regatta in Plymouth Sound, on Monday, the 26th of August. The sports seem to have afforded the highest satisfaction. There were three sailing matches for handsome pieces of plate on the first day, when four cutter-yachts raced for the first prize; eight for the second; and three for the third, making fifteen competitors in all. Two others had entered but failed to reach the port in time. H.M.S. St. Vincent, 120, was in the Sound during the Regatta, gaily dressed in her signal-flags, and more than a hundred sail of yachts were present in the port. The whole scene was exhilarating in the ex-

treme, such as was indeed befitting a royal birth-day, and the joyous feelings of the crowds both ashore and afloat were much enhanced by fine weather, and a spanking northerly breeze. The second day of the Regatta went off well enough, but a calm prevented any racing whatever on the third day, Aug. the 28th.

First Race.—Aug. 26.—The starting gun for this contest was fired from the Hoe, at 17 minutes past 12. The course, both in the first and second race was from Drake's island, out through the Bovisand or Eastern Breakwater passage, thence westward to Penlee Point and back, a total distance of 40 miles. Three times round. For this prize started four yachts.

	Tons.	1st round	2nd round	3rd round
		h. m. s.	h. m. s.	h. m. s.
Mr. Congreve's Corsair	85	1 51 50	3 28 55	4 59 55
Capt. Newburgh's Comet	60	2 0 0	3 37 0	5 11 20
Mr. Hambrough's Medina	44	2 3 30	3 49 20	5 22 58
Mr. Wright's Elizabeth	35	2 4 30	3 46 5	5 25 13

This was a time-race, at the rate of half a minute per ton, and the Comet, therefore, was hailed the winner. The gaining this prize adds another laurel to the Cork Club, which we may mention has been established more than a century. The Cowes Club was founded only in 1815, and the Plymouth Club in 1827.

Second Race.—Aug. 26.—The starting gun was fired from the Hoe at 1h. 30m. P.M. Same course as in the first race. Eight vessels started.

	Tons.	1st round	2nd round	3rd round
		h. m. s.	h. m. s.	h. m. s.
Mr. Moore's Lily of Devon	30	3 7 30	4 45 55	6 17 54
Mr. Pope's Weazle	25	3 7 35	4 47 40	6 19 32
Mr. Wilkinson's Phantom	20	3 10 5	4 47 15	6 31 10
Mr. Dawe's Tartar	30	3 11 20	4 50 20	6 40 9
Mr. Gunston's Champion	25	3 11 20	4 48 35	6 39 22
Mr. Carnac's Sybil	29	3 12 55	4 50 20	6 40 10
Mr. Studdy's Maid of the Mist	30	3 14 50	4 57 25	0 0 0
Admiral Ross's Nix Mungi	18	3 35 15	0 0 0	0 0 0

The Lily of Devon, and Weazle, both built at Plymouth in 1844, were the first and second boats in the last round, and as this second contest was also a time-race, (half a minute per ton to be allowed by the larger yachts to the smaller,) the Weazle was declared the winner, although the Lily reached the goal before her. The Maid of the Mist carried away her top-mast before starting. Some of the beaten yachts belong to the Thames Club.

Third Race.—Aug. 26.—Twice round the same course, as in the first and second races. Started at 3 minutes after 2 P.M.

	Tons.	1st round	2nd round
		h. m. s.	h. m. s.
Mr. Wright's Termagant . .	15	3 55 5	5 41 20
Mr. Luscombe's Gem . . .	17	3 58 30	5 46 5
Mr. Bush's Sylph . . .	17	4 1 45	0 0 0

This race was won by the Termagant, which little vessel belongs to the Royal Southern Yacht Club, (Southampton), of which the Marquis of Conyngham is the Commodore, carrying his broad pendant in the Flower of Yarrow, yawl, 183 tons. We cannot but wish that the Red Rover of Plymouth had "put in for this plate." Her owner (brother to the owner of the Weazle,) lost a fine chance. So long ago as 1836, the Sylph and Rover were "pugnacious" rivals, and it is somewhat doubtful whether Termagant could always ensure "the fortune of war" against them.

The Phantom yacht, 10 tons, John S. Knight, Esq., which did not reach

Plymouth in time to race against Sylph, Gem, and Termagant, did her duty well at the Harwich Regatta, on the 19th of Sptember, by beating the Foam, belonging to the Thames Club, as well as another craft, named the Crisis. We ought to mention that the Termagant now belongs to the Plymouth, as well as the Southampton Club.

During the sailing matches, a Zigzag race between a gig and a punt came off, which afforded great amusement to the spectators. After very clever manœuvring on both sides the prize was won by the punt. The gig was of course pulled without a rudder.

In the evening, a ball, under the patronage of the members of the Royal Western Yacht Club, took place at the Royal Hotel. There were between two and three hundred present, and the company did not disperse until after three o'clock in the morning; and thus ended the first day's Regatta.

Second day, Aug. 27.—The first prize sailed for was *a purse of sovereigns*, and was contested by trawlers belonging to the port. Five vessels started, and came n in the following order:—

Fawn . .	53 tons . .	Mr. Dyer . .	1
Sarah Stibbs .	49 tons . .	Mr. Stubbs . .	2
Mazeppa .	54 tons . .	Mr. Phillips . .	3
Cheering .	53 tons . .	Mr. Brown . .	4
Gazelle . .	52 tons . .	Mr. Gilpin . .	5

During the first round there was very little wind, the vessels drifting rather than sailing, but in the second round, the breeze freshened a little, and on their return, the three first vessels were awarded the prizes.

A purse of sovereigns was next sailed for by second class trawlers, belonging to the port. The prizes to be divided as follows:—First boat £8, second boat £4, third boat 15s. Only three trawlers started, and after a prolonged race, in consequence of the calm that prevailed, they came in as under:—

Champion . . .	44 tons . .	Mr. Hoppin
Rainbow . . .	42 tons . .	Mr. Phair
Mystery . . .	43 tons . .	Mr. Millman

A silver cup announced to be run for by pleasure boats, was not contested, and the proceedings of the day closed by a match between a punt and gig. This was won, as on the first day, after an arduous struggle, by the punt, which in point of size, seemed smaller than the shark caught a fortnight since in Torbay. But let that pass.

We hope that in August, 1845, on Prince Albert's birthday, a chronometer will be raced for round the Eddystone. Cups are becoming common-place; and as the Plymouth Club is rich, and full of spirit, let it henceforth take the lead in the useful, *versus* the ornamental.

Royal Northern or Clyde Yacht Club.

This Club founded in 1824 bears still, and seems likely to maintain, a very high character. We defer for a short time a notice we had written touching the Club, and now merely subjoin a list of the 49 Yachts belonging to it, all of which, like those of the Plymouth Squadron (p. 572,) are by Admiralty Warrant entitled to wear the Blue Ensign of H.M. fleet without any device in it, save the national Union Jack, as in the Royal Navy.

Patroness—Her Majesty the Queen.

Commodore—His Grace the Duke of Portland.

Vice-Commodore—Robert Morris, Esq.

Treasurer and Honorary Secretary—John Allen, Esq., 120, Buchanan Street, Glasgow.

List of the Yachts of the Club.

Yachts	Rigs	Tons,	Owners.
Ada	c	38	J. C. Beresford, Esq.
Adelaide	c	125	Sir R. G. Booth,
Amina	c	19	H Tennant, Esq.
Amulet	c	50	R. Thomson, Esq.
Arab	y	10	S. Finlay, Esq.
Ariel (a)	c	30	M. Mackenzie, Esq.
Ariel (b)	c	19	T. Bourne, Esq.
Ariel (c)	c	36	W. Muir, Esq.
Belle Anglaise	c	20	J. C. Buchanan, Esq.
Black Eagle	y	30	J. Boomer, Esq.
Blonde	c	30	B. J. Barton, Esq.
Cyclops	c	30	J. Macnair, Esq.
Dream	c	66	Marq. Breadalbane
Edith	c	70	J. C. Ewart, Esq.
Enchantress	c	13	J. Dunlop, Esq.
Falcon (a)	c	27	A. Campbell, Esq.
Falcon (b)	c	60	J. Beardmore, Esq.
Fortuna	c	22	A. M'Neill, Esq.
Gannet	y	10	R. Gage, Esq.
Gem	c	12	T. D. Graham, Esq.
Glance	c	22	Col. Swinburne,
Gleam	c	30	F. Goold, Esq.
Gossamer	c	35	J. Lloyd, Esq.
Griffin	s	16	J, Beardmore, Esq.
Hawk	c	30	T. Mackenzie, Esq.
Isabel	s	140	T. Moss, Esq.
Jack o'Lantern	s	140	Earl of Orkney
Kerbet	c	54	W. Douglas. Esq.
Kestrel	y	202	Earl of Yarborough
Leda	c	30	J. Brandreth
Lufra	c	82	Lord J. Scott
Margaret	c	10	Sir W. Maxwell
Mermaid	c	25	A. Lamont, Esq.
Meteor	c	30	T. D. Graham, Esq.
Midge (a)	y	10	R. Morris, Esq.
Midge (b)	c	12	R. W. Laurie, Esq.
Mountaineer	c	45	A. Campbell, Esq.
Nautilus	s	30	Col. Maclean
Nymph	c	19	M. Pearce, Esq.
Orion	y	57	The Club Yacht
Peterel	c	15	J. B. Hamilton, Esq.
Phebe	c	34	H. F. Penny Esq.
Queen	c	10	A. Smollett, Esq.
Shamrock	c	12	Hon. R. King,
Siren	y	68	R. Kerr, Esq.
Talisman	c	96	R. Meiklam, Esq.
Therese	c	121	Earl of Desart,
Thetis	c	43	D. C. O'Grady, Esq.
Wave	c	25	M. Perston, Esq.

Her Majesty's Visit to Scotland.

On Monday, Sept. 2nd, shortly after 8 o'clock A.M., the Earl of Liverpool, Lord Steward; and the Earl of Jersey, Master of the Horse, arrived at Woolwich, and in a few minutes afterwards Sir J. Clark, Bart., M.D., to accompany Her Majesty to Scotland. The Earl of Aberdeen arrived at about a quarter past 8, having been specially appointed to accompany Her Majesty, in consequence of Sir Robert Peel having proceeded to visit his daughter, who is suffering from severe illness. A field battery of the Royal Artillery, under the command of Capt. Story, occupied a station on the west wharf, and a Guard of Honour of the Royal Marines, consisting of two subalterns, four serjeants, and 100 rank and file, with the colours and band of the corps, under the command of Capt. Mitford. The whole of the Royal Marines off duty followed, under the command of Lieut.-Col. Coryton, and formed in one line on each side of the carriage-way leading from the dock-yard gate to the place of embarkation, where the Guard of Honour was stationed. The Royal Horse Artillery, under the command of Col. Dyneley, C.B., lined the road leading from the dockyard to Greenwich, and were accompanied by the brass band of the troops.

The following Naval and Military Officers assembled on the wharf adjoining the steps leading to the river, and remained in attendance until the arrival of Her Majesty:—The Earl of Haddington, First Lord of the Admiralty; Rear Admiral Bowles; General Sir G. Murray, Lieut. Gen. Lord Bloomfield, Colonels Cockburn, Paterson, Cleaveland, Lacy, J. E. Jones, and Mercer; Lieut. Colonels Dundas and Wylde, Lieut. Col. Colquhoun; Major Sandilands, Brigade Major Cuppage, Capt. Wingfield, and Capt. and Adj. Shone, of the Royal Artillery; Brigade Major Sandham and Capt. Stothard, Royal Engineers; Lieut.

and Adj. Varlo, Royal Marines; Commodore Sir F. A. Collier, and Commander Smith.

Precisely as the dockyard clock struck 9, a royal salute from a battery of 12-po unders, under the command of Capt. Robe, announced that Her Majesty was approaching, and before it was finished Her Majesty's carriage entered the dockyard, the Guard of Honour of the Royal Marines presenting arms, and the band playing "God save the Queen."

Prince Albert first handed down the Princess Royal, who accompanied her Royal parents; his Royal Highness then alighted and assisted Her Majesty to descend from the royal carriage. Her Majesty accepted the arm of the Earl of Haddington, who conducted the Queen to the Admiralty barge, Prince Albert and the Princess Royal entering first. On Her Majesty being seated, Viscountess Canning, Lady in Waiting, and Lady Caroline Somers Cocks, Maid of Honour, entered the barge, and occupied the seats adjoining Her Majesty.

The Admiralty flag, which had been hoisted on the arrival of the Earl of Haddington and Rear Admiral Bowles, was hauled down, and the Royal Standard hoisted on the flagstaff when Her Majesty arrived, and a Royal Standard was hoisted in the Admiralty barge on Her Majesty entering it. Commodore Sir F. A. Collier had the honour of steering Her Majesty to the royal yacht, and Captain Lord A. Fitzclarence received Her Majesty on stepping on board that vessel. The whole of the time occupied in embarkation was less than five minutes, and Her Majesty's arrival on board was announced by a royal salute from the field battery in the dockyard, under Capt. Story, and the hoisting of a splendid Royal Standard on board the royal steam yacht. Her Majesty was most enthusiastically cheered on arriving, on entering the barge, and on going on board the yacht.

At 20 minutes past 9 o'clock the yacht left her moorings having on board Her Majesty, Prince Albert, and the Princess Royal.

The royal squadron consists of the *Victoria and Albert*, steam yacht, Capt. Lord A. Fitzclarence, G.C.B., the *Black Eagle*, st. v., Capt. the Earl of Hardwicke; the *Blazer*, st. v., Capt. J. Washington; the *Stromboli*, steam frigate, Capt. the Hon. E. Plunket; the *Eclair*, st. f. Com. W. G. E. Estcourt; the *Volcano*, st. v., Lieut. C. E. Miller; the *Princess Alice*, st. v., Master-com. L. Smithett.

Woolwich, Sept. 13.—The *Black Eagle* steam vessel, under the command of Capt. the Earl of Hardwicke, was several miles astern of the royal yacht on reaching the Nore. On proceeding to sea, Capt. Lord A. Fitzclarence made signals for the *Black Eagle* to advance, and delayed the progress of the royal steam yacht, until both were opposite to each other. His lordship then made signals to start both at the same time, to ascertain which of the vessels would first reach Dundee. The *Black Eagle* soon showed her superiority over the royal yacht as a sea-going steamer, having gained three miles in six hours against her fast opponent. The *Black Eagle* continued ahead at the same rate throughout the voyage, and consequently was the first to reach the Frith of Tay and Dundee. The *Black Eagle* returned to Woolwich shortly before 10 o'clock this morning.

The following extract of a letter relates the progress of the royal squadron and arrival at Dundee:—

DUNDEE, *Sept.* 11.—Her Majesty has safely landed at bonnie Dundee, after a pleasant, smooth water, fine weather passage of forty-three hours. The embarkation at Woolwich took place in a drizzling rain, but long before reaching Gravesend the day became fine, and continued so throughout. At noon passed the Nore; at 3 off Harwich; at 8 at the back of Yarmouth Sands; at midnight off Cromer; at 9 on Tuesday being close in off Hambro' Head, passed close alongshore by Scarborough, Robin Hood Bay, Whitby, Hartlepool, Sunderland, Tynemouth, Coquet Island, Warkworth, Dustanburgh, Banburgh, and the Farn Islands; and just as the last rays of the sun tipped with gold all that remains of the ancient Abbey of Lindisfarn Uxe, it sunk behind the Cheviot hills—a gorgeous and magnificent spectacle.

Passing Berwick and St. Abbs Head, we soon sighted May Island and the Bell Rock Light; crossed the Tay bars at 3 o'clock, and by 4 dropped anchor off the town of Dundee. A prosperous and excellent voyage, all well on board, and enjoyed it extremely.

RECENT ATROCITIES OF THE GREEK PIRATES.—In the last number of the *Nautical*, (p. 588,) we announced the capture of a pirate in the Mediterranean. It now becomes our painful duty to record the appearance of another set of these ruffians in the *Doro Passage*, in the Archipelago, which is the common track of vessels bound to, and from the Dardanelles. The *Times* of September 19th, has the following paragraph:

"Letters from Athens announce that some pirate boats had appeared in the channel of Andros, captured two merchant vessels, and, it was said, a royal cutter, with a crew of four men, and carrying 16,000 drachmas belonging to the Greek government, and put their crews to death. The headless bodies of 20 of the latter having been washed by the sea on the coast of Andros, the Perricles and Papin French steamers from Port Lion, had started in pursuit of the pirates.

To prove that these are not very extraordinary events in the Grecian waters, we have only to refer our readers to pp. 219, 445 of the present volume of the *Nautical*.

SIR.—Your journal, valuable alike, to the Merchant, as the mariner, has lately given insertion to several articles on the subject of African guano, from which, we are led to suppose that to Liverpool alone we are indebted for the enterprise in opening out to commerce, the island of Ichaboe; a commerce which has already been of incalculable benefit to the agriculturist. Allow me, Sir, to claim some of the honour for the port of London; the house of John Boyd and Co. of London obtained the same information nearly about the same time that it was first known in Liverpool, although from an entirely different channel; and immediately dispatched ships for Ichaboe; from whence they have imported many thousand tons of guano. Trusting you will not allow the Liverpolians to have it all their own way.

I am, Sir, &c.

To the Editor, &c. NAUTICUS.

Nautical Notices.

Hydrographic Office, Admiralty, Sept. 3d, 1844.

Lights on the Coast of Norway.—In pursuance of the intentions expressed in the notice of this office dated the 18th June last, the following lights were to be established by the Norwegian Government on the 1st of this month.

1. A fixed light on Great Torungen island in lat. 58° 23′ 15″ N. and long. 8° 52′ 30″ E.

2. A fixed light on Little Torungen island, bearing from the light on Great Torungen island, N. 4° E. true (or by compass N.N.E.) distant 1237 yards.

Both of the above lights are visible in all directions, and being 130 feet above the level of the Sea, may be seen at the distance of 6 to 7 leagues.

3. A fixed light on Sandvig Point at the Entrance of Arendal, 42 feet above the level of the sea, visible from 3 to 4 leagues on any bearing westward of South and E.N.E. by compass, unless concealed by adjacent land. The light-house stands in lat. 58° 25′ 30″ N. and long. 8° 52′ 10″ E.

The buildings of the above three lights are white.

Sandvig Harbour.—In connection with the foregoing notice, the Norwegian Government has published the following Directions, intended for vessels entering Sandvig Harbour without a pilot.

1. When about two miles from the land, a vessel should bring Sandvig Point Light N. ¼ E. or a sail's breadth open east of Little Torungen Light, and keep along the land eastward of Little Torungen for Sandvig Point Light. The distance from Little Torungen to Sandvig Point is one mile, when about three cables' length will lead to a good berth in from 12 to 16 fathoms.

2. A vessel passing between Great and Little Torungen Islands, should keep a quarter of a cable's length from Great Torungen, and when Sandvig light bears N.b.E. ¾ E., steer for it, and when within a quarter of a cable from it, may bring up as above. The first of the above channels is easiest for strangers.

These directions do not agree with the Danish chart, published last year. With Sandvig point light bearing N. ¼ E. it is open to the westward of little Torungen.—Ed.

H.M.S. Imaum, July 17, 1844.

Port Royal.—Sir, I am directed by the Commodore to forward to you the enclosed copy of a notice relative to the buoy and beacons in and about Port Royal harbour, for the information of all those it may concern.

I am, &c.,

To the Hon. H. Mitchel, Mayor of Kingston. H. W. Hunt, *Sec.*

Notice.—The black buoy off the N.E. edge of the last* Middle shoals is replaced, mounting a staff and vane 18 feet above the horizon; it lies in 7½ fathoms water, with the following marks, viz.:—

The beacon on the Palisadoes is in line with Kingston church by N. 6° 54′, W. true, and the Maiden Sandy Kay in line with Helshire, Hammock Bay by S. 86° 15′, W. true.

The North-west Pelican Shoal having extended itself several yards into the narrow part of the channel towards Fort Augusta, her pile has been driven on its extremity in 15 feet water, and 110 yards in a W.S.W. direction from No. 5, on the pile, mounted with a black sphere.

The colour of the Portuguese Buoy will be changed from black to red, to correspond with the West Middle Shoal Buoy.

By order of Commodore A. R. Sharp, C.B.,

Geo. Biddlecombe,
Master of H.M.S. Imaum.

* Query—West.

Light-house at the Entrance to the Harbour of St. Thomas.—A lighthouse has been erected at Muhlenfeldts Battery, on the east point of the entrance to the harbour of St. Thomas, lying in lat. 18° 19′ 30″ N., and long. 64° 55′ 10″ W. of Greenwich. The elevation of the light above the level of the sea is ninety-two Danish, or 95 English feet; it is visible at a distance of five leagues, the eye being elevated 12 feet above the level of the sea. The light is red, the lantern having red glass panes at S.E., S., and S.W., and it is easily distinguished from lights in the town or neighbouring houses.

This light will commence burning from and after the 1st August, 1844; it will uniformly throughout the whole year be lit one half hour after sunset, and burn until one half hour before sunrise.

This lighthouse has been erected in order that ships may with greater safety enter this harbour in dark nights, and find the windward, or eastern part of the entrance, without being in danger of too near approaching the hidden rocks lying outside the harbour to the east, called the Triangles.

To go clear west of these rocks, the east angle of the lighthouse is brought to bear in a line N.b.W. ½ W., with the S.W. corner of a whitewashed kitchen, lying to the north, which is the nearest the Triangles must be approached, and about one cable-length distant from them; and the more the kitchen is covered by the lighthouse the greater is the distance from the Triangles.

The said kitchen being only about 67 feet north of the Tower, will, during night and clear weather, be visible from the reflection of the lamp.

At the King's wharf in town (west of Christiana fort) a lamp with red glass towards the harbour will at the same time be seen W. of point Muhlenfeldt; this being free, the ship may safely bear away for the harbour.

Prince Rupert's Rock, near the middle of the entrance to the harbour, will always be kept whitewashed, and thereby be visible at night.

For further information reference is made to the chart of the harbour and outside of the island and published a long time ago.

Government of St. Thomas and St. John, St. Thomas, July 18th, 1844.

Inaccurate Charts of the French Coast.—We publish the following extract from a private letter just received from Etaples, in the hope that it will attract attention in the proper quarter, and lead to the adoption of measures tending to prevent a recurrence of such terrible calamities as the wreck of the Reliance, the Conqueror, and other vessels upon the French Coast:—

"On Saturday I went with———to visit the scene of the wreck of the Conqueror, and yesterday that of the wreck of the Reliance, the one on the right the other on the left of the Bay of Etaples. ———has placed the figure-head, of the Conqueror in his garden; it was quite shattered, but he had it repaired He purchased many of the relics washed on shore; among others the geographical charts of the captain, who, probably owed his calamities to an inaccuracy in the chart of this part of the French coast. These charts are those of J. W. Norie, dated 1816, and entitled "A New Chart of Part of the South coast of England, extending from the Downs to Spithead." They indicate neither the double light on Touquet Point, which is on the left bank of the mouth of the Canche, nor the light on Point Ornel, called on the chart in question, Point de l'Orient, which is on the right bank. You will do well to get this inaccuracy noticed in the journals as speedily as possible, and will thereby prevent further disasters. During the thirty years that I have known this coast, more than a hundred vessels have been lost upon it; and I have not the least doubt, that, without due precaution, you will next winter have to deplore fresh calamities. The flat sandy shore from the mouth of the Autlise to that of the Canche, is, in my opinion, more dangerous than the Eddystone rocks. A lighthouse of the first class ought to have been erected long ago, but it remains undone."—*Patriot.*

Tobago.—Notice is hereby given, that for the purpose of rendering more safe the access, during the night, to the port of Scarborough, in this island, a light will be exhibited in the lighthouse, erected on Bacolet Point, on the evening of the 1st of August next, and every evening thereafter, at sunset, and will be kept burning until sunrise.

Bearings of the lighthouse at Bacolet Point, with directions for making the port of Scarborough. This light is a fixed white light, at an elevation of 128 feet above the level of the sea. Vessels approaching Scarborough from windward, and running down the coast on a south-west course, will not open the light until it is brought to bear W.b.S. When the light bears W.N.W. the Minister Rock is in a direct line with it. The Minister Rock lies E.S.E. from the light distant one mile and a half. Continue the same course (W.S.W.) until the light bears N.W.; then haul in W.N.W. until the light bears N., when the ship will be abreast of the lighthouse, and should haul in N.W. for the harbour, paying due attention to the distance from the shore. Having got well inside the lighthouse, and lost sight of the light, vessels can go by the lead, as the water lessens gradually, and may anchor when they get into six or seven fathoms. But after losing sight of the light, coming into the harbour, you must be guided by the eye and the lead.

The eastern point of the reef off Scarborough bears from the lighthouse W. N.W., distant about a mile and a half.

By command, Joseph Duncan, *Harbour-Master.*

Royal Bishop Shoal.—May 7th, 1844, bound up the China Sea. From the continuance of light northerly winds and strong south-westerly current, I judged the passage outside Pulo Sapata and the Catwicks would be attended with considerable delay, and hoping to find less current close in shore, I bore up at noon, when in lat. 9° 40′ N., long. 108° 22′ E. (By three chronometers agreeing from Singapore.) At 3 P.M. having run about 8½ on a west course, in 36 fathoms shoaled suddenly on the eastern edge of the Royal Bishop Shoal to 20, 15, and 14 fathoms; 4h. calm, current south-west one mile and half per hour, observed long. 108° 13′ E., or 2′ 40″ West of Pulo Ceicer de Mer. 4h. 30m. a breeze sprang up, steered west and W.b.N., for fifteen miles, carrying irregular soundings of 10 to 14 fathoms over hard bottom, 9 deepened suddenly to 20, steered N.b.W. and gradually increased depth to 32 fathoms.

It therefore appears that this shoal is of much greater extent than laid down at present; its breadth being about 18, or from long. 107° 55′ E. to 108° 13′ E., which places its western edge about 22 west of the position assigned it in Horsburgh's latest directory and chart.

As this bank does not appear to have been surveyed by Captain Ross, these remarks may be useful. The longitudes may be depended upon, they agreeing with that officer's position of the centre of Pulo Ceicer de Mer observed three days afterwards.

James Seward Field,
Master of the ship Ernaad.

The Experimental Squadron is now commissioned. The Commanders' appointments were received on Sunday morning, and are as follow:—

Firebrand, steam-frigate, Capt. A. L. Corry, to command the experimental squadron; *Flying Fish*, 12, Com. Robert Harris; *Daring*, 12, Com. H. J. Matson; *Osprey*, 12, Com. Frederick Patten; *Waterwitch*, 10, Com. Thomas Fras. Birch; *Pantaloon*, 10, Lieut. acting Com. Edmund Wilson.

The complements of the vessels are to be—*Firebrand*, 170; *Flying Fish*, *Daring*, and *Osprey*, 110 each; *Pantaloon*, and *Waterwitch*, 80 each. Com. Mat-

son, and Com. Birch happening to be here, commissioned the *Daring* and the *Waterwitch* on Monday; they have, consequently, had considerable advantage in getting manned. The *Daring* was full and some over the same day. On Tuesday, the *Flying Fish*, and *Firebrand* hoisted their pendants, and on Wednesday, Com. F. Patten commissioned the *Osprey*. The *Pantaloon* was also commissioned on Wednesday, at noon, and yesterday, (Friday,) the *Flying Fish*, *Osprey*, and *Pantaloon* were removed from the basin to their respective hulks, to complete their provisions, &c., and prepare for sea. Some very fine men have joined the brigs, they having been here unemployed for a long time. In addition to the above, the following have been commissioned at Chatham:—

The *Espiegle*, built at Chatham, on the design of the committee of naval architecture, Messrs. Read, Chatfield, and Creuze, commissioned by Com. Thomas P. Thompson, (1841); the *Cruizer*, 16, built in 1828, commissioned by Com. E. G. Fanshawe, (1841); the *Mutine*, built at Chatham, on the design of Mr. Fincham, the master shipwright of that establishment, commissioned by Com. R. B. Crawford, (1842.)

The brigs *Mutine*, *Espeigle*, and *Cruizer*, at Chatham, are more than three parts manned, and will complete their number at Portsmouth, for which they will sail on Monday next.

H.M.S. Plover.—By the mail from China, which arrived in July, a statement appeared that the *Plover*, surveying vessel, Capt. Collinson, had captured two piratical junks; that several Chinese had lost their lives on the occasion, and that after their capture doubts were expressed as to their being pirates. By letters from this vessel, it appears that these junks were actual pirates, and that their crews, consisting of upwards of 30 men (besides those slain), have all been condemned to death by the Chinese authorities.

A letter from an officer on board her Majesty's ship *Samarang*, off Solombo, Java Sea, dated June 20th contains an account of a recent conflict with the pirates who infest the place. A party of forty attempted to surprise the captain of the vessel (Sir E. Belcher) who was on the reef of an island near Tidore with his instruments, but were soon repulsed by the firing from the barge, which was in attendance. The captain, after this aggression, determined to chastise the pirates, and finding the island deserted, gave orders that the village and all the vessels on the beach should be burned. He chased two of the vessels called "*prahus*" (pronounced "*prow*") with the barge, and their crews having deserted them they were towed out and burned, About midnight he anchored in a retired bay, but was surprised at two o'clock in the morning by the sound of gongs and other instruments, and before the party was ready for action five large war prahus were close upon them, all gaily decorated. The leader demanded of the party in the barge if they had a ship, and on the captain answering that the British ship of war to which they belonged was outside, they set up a yell, and began dancing and throwing spears. The English repelled them by a discharge of shot and cannister, and secured three of the prahus, which would not burn when an attempt was made to fire them. While the English were pursuing the other two prahus, five more made their appearance, and were repulsed, not, however, till the captain was wounded in the thigh by a ball of one pound weight, and 19-16 inches diameter. In this condition he was taken to the ship, when the ball was extracted, and another engagement ensued between the barge, accompanied by two cutters, and some more prahus, some of which were taken and burned. The captain at the date of the letters, was in a fair way of recovery, while the pirate chief is supposed to have been killed.

H.M.S. Bittern.—Accounts received from the Cape of Good Hope to the 1st of June, state that Midshipman Radcliff, and two men of her Majesty's ship *Bittern*, had been drowned at Natal, by the cutter upsetting, in the act of going

ashore at Natal. The rest of the crew of the cutter, seven in number, were saved by Mr. Low, the second in command of her Majesty's ship *Fawn*, which happened to be in the bay at the time of the accident. This officer is highly praised for his adventurous conduct on this and several occasions, for which he merits the civic crown.

Heroic Conduct of a Young Naval Officer.—A few evenings ago, as the Hon. Mr. Walpole, a Mate of the *Collingwood*, lying at Spithead, was coming on board, from a yacht, a little after 12 o'clock, and when within about fifty yards of the vessel, his boat, which was very small, upset. It was blowing rather fresh, and very dark at the time, and being encumbered with his pea-jacket he would inevitably have perished, but for the heroic conduct of Mr. Roderic Dew, a brother mate. This young gentleman, who had taken his place on the watch shortly before the accident occurred, on hearing a man in the water, instantly jumped overboard, and swam to his assistance. The Hon. Mr. Walpole was nearly exhausted when he reached him, and the sea being very rough, it was not without the greatest exertion he succeeded in bringing him in safety to the ship.—*Hampshire Telegraph.*

The King of the French.—Visit to England.—The French steamer Caiman, Capt. Donnadieu, arrived from Cherbourg, on Tuesday and came into the harbour. She brings despatches to the Commander-in-chief at this port, notifying, (we are informed,) the positive intention of his Majesty the King of the French, to land at Portsmouth in the second week in October; the precise day and hour, however, named in the despatch, is only known to the Commander-in-Chief, and the Lords of the Admiralty. The despatches are to the effect, we believe, that his Majesty wishes accommodation provided for the fleet which will accompany him to this country. The Baron de la Ronciere Lenoury, Aide-de-camp to Admiral La Susse, (who will command the fleet or Squadron in attendance upon his Majesty,) arrived in Le Caiman to present the despatches, and conduct the necessary arrangements for his Majesty's reception. Le Caiman did not salute in coming into harbour. She is a remarkably fine frigate. Her officers had a good view of the *Queen*, 110, Capt. Martin, which was leaving the harbour under canvas, at the time the Caiman was entering it. A finer specimen of a British man-of-war, could not have been exhibited. The Caiman sailed late on Wednesday evening for Cherbourg.

Bristol Docks.—We subjoin the resolution passed at the meeting of the Dock Proprietors on the 6th inst., with regard to the projected improvements of the docks:—"That this meeting is of opinion, that the enlargement of the southern* entrance lock into Cumberland basin, according to the plans of Mr. Brunel, now submitted, by effecting so important an object as the means of admission into the basin, of the largest steam vessels, and by the greatly increased facilities it will afford for the passage of vessels now frequenting the port, into and out of the harbour, will be a great benefit to the mercantile interests of the port: and although this meeting cannot but feel, that after the great pecuniary sacrifices already made, by the proprietors of stock in the Dock Company, for the improvement of the port, no obligation rests with them to effect, at their sole cost, those additional improvements, which may have been rendered desirable by the introduction of steam navigation, or otherwise, they are, from a desire to promote the prosperity of the port, ready, so far as they are interested, to concur in, and sanction the proposition now submitted to them, and the expenditure out of the revenue, and other funds of the company, of the additional cost required for the proposed enlargement of the lock."

* The inner lock, which leads from Cumberland basin into the harbour.

Goodwin Safety Beacon.—Captain Bullock has just completed the replacement of his safety beacon on the Goodwin Sands, which was run down by a careless Dutchman some weeks ago. It is affixed upon the same principle as at first, with an improvement in its base. This is now composed of iron instead of wood; and it consequently penetrates further into the sand than the former.

Sufferings of the Crew of an English Vessel.—The last New York papers announce that the ship Vicksburg Captain Berry, which had arrived at New York from New Orleans, fell in, on the 6th August, in lat. 26° 27′ long. 97° 46′ with an open boat containing seven persons, and took them on board. They proved to be the captain and crew of the British schooner Orange, which was lost on the voyage from Jamaica for Matanzas. Their names were as follow:—Alexander M'Donald master; William Young, mate; Edward Cook, Richard Evans, William Roscoe, seamen; and Robert Wilkinson, cook. They had been thirteen days in the boat, which was only fourteen feet long. When fallen in with they were in a very exhausted state, and three of them had to be lifted on board. The youngest of them, William Roscoe, was totally insensible, and survived but about three hours, and at sunset his body was committed to the deep. Captain M'Donald stated that on the 24th July, at two A.M., when in lat. 22° 45′, long. 85·4, his schooner was capsized in a sudden squall from the eastward. Fortunately when she capsized, the jolly-boat being in the bottom of the long boat, turned over, and all hands succeeded in getting into it, and got clear of the vessel, which almost at the same moment disappeared. They were then left to the mercy of the waves, without provisions or water. On the 25th there being no appearance of land, the boat's course was altered to westward, with the hope of falling in with some vessel. They continued this course till the 28th, the wind being all the time eastwardly. On this day for the first time, it rained for about two hours. By using two pair of shoes, all they had among them, and by wringing their clothes, they succeeded in getting about half a pint of water each. From this time till the 31st they saw no vessel, and were without water. On the 31st and the day following, it rained three or four hours, and they obtained sufficient water to quench their thirst for the time. From the 1st to the 6th of August they obtained no water, but on one of those days they picked up a piece of bamboo, which was found to contain four small fishes about two inches long, which they divided among themselves; this was all the food they had while in the boat. On the morning of the 6th three ships passed them, but it was supposed the boat was not seen by them.

The Peninsular and Oriental Steam Company have added another magnificent vessel to their ships in the Eastern seas. The Precursor, a splendid new vessel has left Southampton, intended to run between Bombay and Suez.

Sir.—A constant subscriber ventures to offer a suggestion, which would greatly add to the interest of your "new navy list," viz., to give the builder's name of all the ships, both in commission and building. This is very much wanting, and could easily be added. At p. 584, of the present No. (9) of the *Nautical Magazine* all the ships built, and building by Capt. Symonds are enumerated. Here is at once the best part of the information, and a penny letter to each of the dock-yards will get the rest. This, be assured, would greatly add to the interest of your book, particularly as relates to the brigs recently built.

Penryn Creek at Falmouth, is to be converted into a floating dock and harbour.

Reminiscences of Captain Cunningham.—"Perhaps no place in the history of ages can boast of such a rapid rise as the town of Hong Kong. In August, 1841, not one single house was yet built; not a portion of the brushwood had been cleared away from this desolate spot. By June 1842, the town was considerably more than two miles long, containing storehouses and shops, here called 'Godowns', in which almost every article, either Eastern or European, could be procured, and most of them at not very unreasonable prices.

The town already boasted of 15,000 inhabitants, and it was almost impossible to prevent the people from the opposite coast from flocking to us, for the double purpose of making money at our expense, and escaping the wrath of the mandarins, who never neglected the opportunity of visiting severely upon themselves and families the dreadful offence of giving countenance to the foreign barbarians.

Wrecks of British Shipping.

Continued from p. 578.—cs. crew saved: d. drowned.

VESSELS' NAMES.	BELONG TO.	MASTERS.	FROM.	TO	WRECKED.	WHEN.
Active 232	———	Wright	Hull	———	———	
Amelia	———	———	Sydney	Manila	St. Berndino	April 30 6d
Ardent	Cardigan	Peterson	Limerick	Boston	Kentish K.	Aug. 12, cs
Bristolian 235	Bristol	———	———	———	C. Voltas	July 27, cs
Bristolian	———	Cook	———	Ichaboe	African C.	August
Brothers	Swansea	———	Wicklow	Chester	Rhyl Flat	Aug. 17, cs
Ceylon	Belfast	missed	stays	Belfast	Camden P.	Sept. 8, cs
Effort	Newcastle	Scott	Riga	Gloucester	C. Denmark	Aug. 27, cs
Favourite 240	Workington	Byers	Derry	———	Dunroof S.	Aug. 16, cs
Gleaner	Quebec	wreck	seen	44° N. 45′ W	———	July 24,
Judith	Jersey	Damaresq	Llanelly	Loando	Foundered	Aug. cs
Magpie	Sunderland	wreck	driven on	shore	———	Aug, 22,
Neptunus	———	———	Hull	Altona	Foundered	Aug. 11,
Pomona 245	———	Tucker	Plymouth	Swansea	Manacles	Sept. 8, cs
Providence	Newcastle	wreck	fallen in	abandoned	Dogger B.	August
Robert & Ann	Stockton	———	———	Tangiers	Africa	August
Royal Admiral	———	Garbett	Newport	Aden	off Colaba Lt	July 30, cs
Silen	Plymouth	———	———	Tangier	Africa	August
Sir W. Wallace	———	Anderson	Quebec	———	St. Belleisle	July 5, cs
Wanderer 251	Newcastle	Hardy	Newcastle	Constantnpl.	Off Filey	Sept. 7, cs
William	Newcastle	———	———	———	Foundered	August
XL.	Hartlepool	———	———	———	Dungeness	Aug. 3,

232—Papers washed on shore near Nordeney, sailed August 17th.
235—Crew brought home by Achilles from Augra Pequena.
242—Crew taken to Rio and master landed at Falmouth from the brig Antelope of Jersey.
252—Mate picked up in jolly boat and landed at Hjorring, master and crew took to long boat not since heard of.—August 11th.

Merchant Seamen.—Recently an act was passed to amend and consolidate the laws relating to merchant seamen, and for keeping a registsr of seamen. No seamen is to be taken to sea without a written agreement, or without a register ticket, obtained from such seamen, under a penalty of £20. The General Register-office of merchant seamen is to be continued under the style of "the General Register and Record-office of Seamen," where all seaman are to be registered, or at the Custom-houses of the several outports of the United Kingdom, and every applicant is required to answer the questions set forth in one of the schedules. Not the least important, though nearly the last provision in this act, is the 74th section, under which, relief can be afforded to Lascar seamen, who having been brought to the United Kingdom on board any ship, shall be found in distress for want of food, clothing, or other necessaries, the Commissioners for executing the office of Lord High Admiral, at their discretion, may supply necessary and reasonable relief to every such person and seaman, and maintain him until he shall be sent on board some ship, for the purpose of being conveyed to or near to the port from which he was shipped; and all expenses may be re-

covered by legal process, from the owner and master, or either of them, of the ship on board whereof such person or seaman shall have been brought from Asia or Africa. The act is to take effect from the first of January next.

The Great Britain.—At a special meeting of the Dock Board on 16th Sept. the guarantees required from the Great Western Steam Ship Company, were satisfactorily settled, and only wait reduction into a formal legal shape, which will be done without delay. It is hoped that by the 16th of October, the necessary alteration in the gates and masonry will be so far effected as to admit of the egress of the vessel, from the Floating Harbour into Cumberland basin.—*Mirror*, Sept. 21st.

Hurricane.—A dreadful hurricane and flood visited the Wisconsin territory, (North America,) on the 8th of August. The storm was accompanied with hail and rain, and swept over the counties of Brown and Calumet, with such extreme fury, that in the space of twenty minutes, property was destroyed of the value of 20,000 dollars! Houses, barns, bridges, fences, and trees were scattered and tossed about like chaff, and in many places, the crops of every kind were flattened and destroyed. Trees four and five feet in diameter, were twisted off at Duck creek, and at Suamico river, all the large trees for the distance of half a mile in the direction of the bay-shore, were either torn up or blown down. Every bridge between Twin Rivers and Green Bay, and two-thirds of those between Green Bay and Fond du Lac, were swept away.

Expedition.—A Liverpool paper states that several ships have left that port for the western coast of Africa, with sealed instructions, to be opened in a certain latitude, and each carrying an experienced practical chemist, furnished with tests for ascertaining the real qualities and composition of ores and salts. The destination of these vessels—probably the pioneers of a new traffic—is understood to lie between the 20th and 30th degree of latitude on the western African coast, and their object the discovery of certain suspected veins of copper, lead, iron, or gold, stated to exist about forty miles from the sea coast, and in a rich and fertile country.

Naval Intelligence.

Portsmouth.—Arrivals.—August 24th, *Victoria, and Albert* yacht,—28th *Black Eagle*.—Sept. 15th, *Styx*, Capt. Vidal, from the Azores, having brought home the Tay, W. I. packet; 17th, moved into harbour.—15th, *Comet*.—Departures.—September 2nd, *Black Eagle*, for Woolwich.—5th *Victoria and Albert*, for Woolwich.—7th, *Collingwood*, 80, Capt. R. Smart, with flag of Adml. Sir G. Seymour, for the Pacific.—17th, *Queen*, 110, Capt. Martin, moved to Spithead.—20th, *Styx*, for Azores survey.—In Harbour.—*Victory, Excellent, Nautilus, Flying Fish, Daring, Osprey, Pantaloon, Waterwitch*, and *Styx, Fearless, Dwarf*, and *Echo* steamers.—In Dock.—*Prince Regent, Vindictive, Athol*, and *Scourge* (building.)—At Spithead—*Queen*.

Plymouth.—Arrivals.—14th Sept. *Styx*, Capt, Vidal.—17th, *Hecla*, st.v. Com. J. Duffill, from Gibraltar, with intelligence of peace between France and Morocco.—19th, *Rhadamanthus*, Mas. Com. M'Laen, from Cork.—20th, *Styx*, from Portsmouth.—Departures.—14th, *Styx*, Capt. Vidal, with W. I. packet, Tay.—20th, *Styx*, for the Azores.—In Harbour.—*San Josef, Rhadamanthus*, and *Confiance*.—In Dock.—*Kent, Ranger, Armada, Flora*, and a dock-yard lump.—In the Sound—*St. Vincent*.

Sheerness.—Arrivals.—August 19th, passed up to Chatham, the *Thunder*, Com. E. Barnett.—September 4th, *African*, sch. for Ramsgate, with the remains of Capt. P. Fisher, r.n.—12th, *Comet*, to Chatham.—Departures.—August 26th, *Raven*, Lieut.-Com. J. Stephen,

WOOLWICH.—ARRIVALS.—August 24, *Princess Alice*, from Dover.—Sept. 3, *Black Eagle*, from Portsmouth.—DEPARTURES.—August 27th, *Black Eagle*, for Portsmouth.

PROMOTIONS AND APPOINTMENTS.

(From the Naval and Military Gazette.)

PROMOTIONS.

RETIRED CAPTAIN—T. Galloway.

RETIRED COMMANDERS—F. Frankling—J. P. Blennerhassett.

COMMANDERS—G. M. Hunter (1828) J. B. Marsh (1830)—P. H. Dyke (1831)—H. C. Otter (1831)—G. Wodehouse (1833)—J. Sankey (1835)—J. Hoseason—J. M. Potbury, flag lieutenant to Rear Adml. Sir S. Pym, KCB.

LIEUTENENTS—W. Mooney (1836)—H. De Lisle (1837) T. Miller—E. Rice—C. Sulivan—T. Cochran—J. C. Bailey (1840).

MASTERS—W. H. T. Green—H. A. Moriarty.

SURGEON—R. W. Clarke.

PAYMASTER AND PURSER—E. Gabriel.

NAVAL INSTRUCTORS—Rev. J. M. Edwards—Messrs. Gorham and Richardson.

APPOINTMENTS.

CAPTAINS—M. H. Dixon (1811) to *San Josef*, with the charge of the ships in ordinary at Devonport—R. Arthur, C.B., (1840) to *Victory*—A. L. Corry (1821) to *Firebrand*, steam frigate, to command the experimental squadron.

COMMANDERS—W. C. B Estcourt to *Eclair*—E. Barnett (1831) to *Thunder*—H. J. Matson (1843) to *Daring*—F. Paten (1837) to *Osprey*—R. Harris (1841) *Flying Fish*—T. Birch (1840) to *Waterwitch*—E. Wilson (1824) act. to *Pantaloon*—R. B. Crawford (1842) to *Mutine*—E. G. Fanshawe (1841) to *Cruiser*—T. P. Thompson (1841) to *Espeigle*—W. J. Clifford (1842) to *Wolverine*—C. Fraser (1823) to *Royal Sovereign* for Packet Service at Holyhead—E. G. Fishbourne (1841) to study at Naval College.

LIEUTENANTS—J. W. Probert (1844) T. J. R. Barrow (1843), L. B. Mackinnon (1842), S. F. Short (1840), G. Pyne (1841) to *Formidable*, flag ship at Gibraltar—P. A Halkett (1842), T. Belgrave (1843), C. R. Johnson (1843) to *Eclair*—H. Ainslie (1838) to *Stromboli*—T. B. Christopher (1841), H. G. Austen (1841) to *Excellent*—F. B. P. Seymour (1842) to be flag of Rear Adml. Sir G. Seymour, *Collingwood*—W. Peel (1844) to *Thalia*—S. B. Dolling (1841) to be agent for Mails—Cooper and C. A. Isaacson to *Caledonia*—H. De Lisle to *Alfred*—J. C. Bailey and T. Miller to *Agincourt*—B. Sharpe (1839) and W. E. A. Gordon (1842) to *Firebrand*—R. Stoddart (1837) W. R. Rolland (1841) and F. C. Herbert to *Daring*—P. W. Coventry (1844) to *Waterwitch*—J. A. St. Leger (1841) and G. Kerr to *Flying Fish*—W. A. Pearce (1841) and A. T. Freese to *Osprey*—D. Reid (1840) to *Pantaloon*—Hon. F. Curzon and Hon T. A. Pakenham to *Mutine* R. C. Kevern (1841) and E. T. Hinde (1844) to *Cruiser*—G. B. Dowse (1841) and L. Fitzmaurice (1844) to *Espeigle*—M. H. Rodney (1840) to *Cruiser*—L. De T. Prevost (1841) to *Waterwitch*—T. E. L. Moore (1843) to *Winchester*—G. R. Preedy (1844) to *Queen*—H. J. Robins (1840) to *Flying Fish*—W. K. Hall (1841) to *Pantaloon*.

MASTERS—H. A. Moriarity to *Vesuvius*—J. T. Russell to *Firebrand*—H. Harper to *Waterwitch*—J. T. Crout to *Pantaloon*—H. D. Burney to *Eclair*—J. Scott to *Thunder*—T. C. Pullen (1844) to *Flying Fish*—F. R. Sturder to *Daring*—B. Renaud to *Mutine*—G. Andrews to *Cruiser*—F. Cole to *Osprey*—J. Bodie to *Espeigle*—R. G. Wills to *Spartan*.

MATES—T. H. Molyneux, R. Berrington, F. W. Gough, A. C. Birtwhistle, H. West, and R. H. L. Warner to *Excellent*—L. P. Pigott to *Victoria and Albert*—P. G. Nettleton to *Eclair*—H. N. Burroughes and A. G. West to *Firebrand*—C. D. B. Kennedy and C. Wake to *Daring*—W. A. R. Lee to *Hecla*—J. A. L. Wharton to *Flying Fish*—R. W. Courtney to *Osprey*—J. S. Mann to *Pantaloon*—H. B. King to *Cruiser*—M. B. Dunn to *Espeigle*—W. G. Mansfield to *Queen*—P. G. Nettleton to *Eclair*—J. H. Forneaux to *Mutine*.

SECOND-MASTERS—E. H. Garwood to *Pluto*—J. Thomas to *Firebraud*—W. F. Haines to *Raven*.

MIDSHIPMEN—A. Stirling and C. H. Simpson to *Firebrand*—J. G. Boileau & A. L. Fox to *Daring*—W. J. Jerden and F. Peel to *Waterwitch*—J. H. Stirling to *Flying Fish*—C. O. B. Hall and W. Page to *Pantaloon*—H. Rogers to *Mu-*

line—R. Rawlings to *Cruiser*—G. A. J. Kingston and H. M. Bingham to *Eclair*.

NAVAL CADETS—O. C. Symonds to *Eclair*—C. R. Tuckey to *Alfred*—S. P. Townsend to *St. Vincent*—A. Ballingall to *Illustrious*—R. H. Roe and F. O. Handfield to *Firebrand*—J. Jenkins and C. Grant to *Flying Fish*—M Porter and L. Geveste to *Osprey*—Bell to *Daring*—G. Handfield to *Cruiser*.

MASTERS' ASSISTANTS—J. Keddle to *Firebrand*—A. Brown to *Daring*—C. E. F Chatfield to *Flying Fish*—E. R. Jackson to *Osprey*—A. Raven to *Pantaloon*—T. C. Adams to *Mutine*.

SURGEONS—W. Bland to the superintendence of the *Tasmania* convict ship—J. Coulter, M.D. to *Firebrand*—O'Neil Ferguson MD. to *Daring*—J. Douglas to *Waterwitch*—H. R. Banks to *Flying Fish*—J. Stewart to *Osprey*—W. Robertson to *Pantaloon*—J. W. Wallace to *Cruiser*—H. T. S. Beveridge to *Mutine*—J. Park to *Espeigle*—J. Ferrier to *Thunder*—A. C. Macleroy to be surgeon superintendent of *Phœbe* convict ship—J. Machonchy to *Eclair*.

ASSISTANT SURGEONS—F. M. Rayner to *Thunder*—C. McShane to *St. Vincent* for service in Haslar Hospital—W P. Banks to *Crane*—G. Everett to *Osprey*—V. A. Clack to *Daring*—G. A. Nicholls to *Collingwood*—C. Hartman to *Eclair*.

PAYMASTERS and PURSERS—H. M. Salter to *Pantaloon*—W. H. Dutton to *Thunder*—T. R. Hallet to *Eclair*—S. Wadland to *Excellent*—G. H. Moubray to *Daring*—G. A. Lance to *Cruiser*—J. S. Hill to *Osprey*—J. Lewis to *Espeigle*—J. E. Brooman to *Mutine*—W. Weaver to *Waterwitch*.

CLERKS—M. Hastings to *Sparrow*—A. Law to *Pantaloon*—W. C. Brown to *Daring*—T. W. Spear to *Dwarf*.

The following Midshipmen passed for Lieutenants at the Naval College lately, Messrs. Brandreth, Gough, Birtwhistle, and Maunsell.

COAST GUARD.

Appointments—Lieut. R. O'Brian to Langley Fort—Lieut. S. F. Short to Westgate—Lieut. A. T. Morley to Newquay.

Removals—Lieut. W. T. Strettel to Newhaven—Lieut. J. Wright to Courtmasherry—Lieut. T. S. Coppinger to Cowes—Lieut. Spurin to Yantlet Creek—Lieut. E. Hennah to Ecclesbourne—Lieut. H. Jeston to Bishopstone—Lieut. A. M. Sharp to Auchmithie.

BIRTHS, MARRIAGES, AND DEATHS.

Births.

Lately at Worton, Isle of Wight, the lady of Capt. G. Hammond, R.N., of a daughter.

At Farcham, Sept. 1, the lady of Lieut. H. Loring, of a daughter.

At Woolwich, Sept. 3, the lady of Lieut. Congdon, R.M., of a son.

At Edinburgh, the lady of A. Anderson, Esq , of a son.

At Banff, Aug. 8, the lady of Lieut. Woodhouse, R.N., of a son.

At Kingstown, Aug. 13, the lady of Mr. A. Jack, R N., of a daughter.

Marriages.

At Kessingland, Capt. W. H. Henderson, R.N., C.B., to Elizabeth Martha, relict of the late Captain the Hon. Lord J. Townsend, R.N., of Yarrow, Norfolk.

At Leamington, Aug. 2, Capt. Meredith, R.N. to Marian D'Oyley, widow of the late J. B. Hoy, Esq., of Thornhill Park, Southampton.

At Naples, Aug. 21, Capt. Lord W. Compton, R.N., second son of the Marq. of Northampton, to Eliza, daughter of Rear Admi. the Hon. G. Elliott.

At Toronto, Aug. 1, Canada West, F. Richardson, Esq., to Harriet Eliza, daughter of Com. R. Otway.

At Sidmouth, September 2, Captain Massingberd, R.N., to Julia, daughter of M. Gutteres, Esq., of Belmont.

At St. Georges, Stonehouse, Sept. 4, Lieut. Goldsmith, to Mrs. Williams.

Deaths.

At Wavering, Kent, Sept. 7, aged 74, Baron De Raigersfield, Rear Admiral of the Red.

At Barnstaple, Sept. 1, Retired Com. C. Hole.

At Cawsand, Sept. 8, near Devonport, Mr. M. Pritchett, Surgeon R N.

At Torquay, Capt. T. Forrest, R.N.

At Haslar Hospital, Sept. 11, Capt. B. Hall, R.N., in his 56th year.

On Coast Guard Service, County of Cork, Lieut. J. Wright, R.N., aged 50.

At Thorney, Capt. C. Neville, R.N.

A Substitute for Steam.—The Paris Academy of Sciences have discussed a paper presented by M. Selligues, who claims the discovery of a new and important motive power as a substitute for steam, and which consists in the admixture of atmospheric air with hydrogen gas, by which an explosion is produced. M. Selligues admits that he has some difficulties to overcome, but it has been proved that with so small a quantity as three to five litres of hydrogen gas, mixed with atmospheric air, a weight of 1000 kilogrammes has been rapidly raised to the height of three feet. The apparatus for the production of hydrogen gas will occupy much less room, and cost less money than steam-boilers, and the stowage required for fuel, which is now the great obstacle to long voyages, will be dispensed with.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st July to the 20th August, 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In.Dec	o	o	o	o						
21	W.	29·78	29·80	57	62	53	63	NW	NW	5	5	qbc	qo
22	Th.	29·75	29·74	58	62	53	63	W	W	3	4	o	o
23	F.	29·74	29·74	58	67	56	68	S	S	1	1	bcm	bcm
24	S.	29·69	29·71	55	65	48	66	S	S	1	1	bcm	o
25	Su.	29·94	29·96	57	65	53	67	NW	NW	2	2	o	bcm
26	M.	30·04	30·08	58	60	53	61	NW	NW	2	2	o	o
27	Tu.	30·12	30·13	56	64	52	66	NW	NW	4	3	bcm	bcm
28	W.	30·14	30·16	52	62	44	64	NE	NE	1	1	bm	bm
29	Th.	30·16	30·18	56	68	42	70	SE	NE	1	2	b	b
30	F.	30·15	30·19	57	67	45	69	E	NE	2	2	bc	bc
31	S.	30·35	30·37	59	71	46	72	SE	E	2	2	bc	b
1	Su.	30·40	30·43	56	74	48	76	N	E	1	2	b	b
2	M.	30·36	30·32	58	72	48	73	E	E	1	3	bf	b
3	T.	30·16	30·12	63	67	52	68	NE	NE	4	4	bcm	bcm
4	W.	30·03	30·01	63	72	61	73	NE	NE	3	4	o	b
5	Th.	29·90	29·86	64	68	60	70	NE	E	4	3	o	bc
6	F.	29·90	29·95	65	71	56	73	S	SW	1	3	bc	bc
7	S.	29·94	29·94	64	72	58	73	S	S	1	3	bcr 1)	bc
8	Su.	29·95	29·88	61	72	57	73	NW	W	1	1	bm	bcmtlr 4)
9	M.	29·75	29·79	56	62	55	63	N	NE	1	1	or (2	or 3)
10	Tu.	29·86	29·88	55	63	54	64	N	W	1	2	or 1)	bc
11	W.	30·04	30·05	52	64	46	65	NW	N	2	2	bc	bc
12	Th	30·05	30·11	57	64	50	65	W	W	1	1	o	o
13	F.	30·20	30·20	58	64	52	66	SW	SW	2	2	o	bc
14	S.	30·13	30·11	60	67	53	69	SW	SW	2	2	bc	bc
15	Su.	29·88	29·88	62	68	57	69	S	SW	6	4	qor 2)	bcr 4)
16	M.	29·91	29·89	65	69	63	70	SW	SW	4	4	bc	bc
17	T.	29·78	29·76	66	70	61	71	SW	NW	5	5	qbcp 2)	qbc
18	W.	29·88	29·98	54	56	53	57	NE	NE	2	2	or 1) (2)	bc
19	Th.	29·99	29·96	50	58	41	60	NE	NE	3	3	bc	bc
20	F.	30·00	30·02	53	62	48	63	N	NE	2	2	bc	bc

August, 1844.—Mean height of the Barometer=29·850 inches; Mean temperature=58·3 degrees; depth of rain fallen 1·94 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Capt. Beechey's letter in reply to Lieut. Edye, on the Inclined Angle is under *consideration.*

Hunt, Printer, 3, New Church Street, Edgware Road.

CAYENNE AND ITS APPROACHES, GUAYANA.—*Extract from Remarks, by Commander A. Darley, of H.M.S. Electra.*

ON the 3rd of June we got into the great equatorial current which we found setting W.N.W. from three to three and a quarter miles per hour. To work to windward here was impossible, and we stood in shore hoping to meet the tides which ebb and flow regularly along the coast of British Guayanas; but in this we were deceived, and coming suddenly on the coast when by our reckoning we were fifteen or sixteen miles off, I deemed it prudent to anchor the ship at night, which was done on those of the 6th and 7th of June. We thus ascertained to a certainty that the tide never sets to the eastward. Our tide log hove every hour gave a medium rate of current of nearly 2′ an hour W.N.W., and it occupied us three days to beat 50′ to windward.

In working up along this shore a formidable danger must be cautiously guarded against. When the wind is to the northward of east and a fresh breeze, a great sea tumbles in on the coast, and causes heavy rollers which break in 5 or 6 fathoms water. Thus, standing in shore on the 8th June to the westward of the Devil islands, we were obliged quickly to tack in 8 fathoms water, the rollers breaking heavily a cables' length from the ship. They do not break continuously, often remaining quiet a length of time, when suddenly they burst with great violence, and would prove fatal to a vessel caught amongst them. Standing in on the 5th June, we crossed a bank with 20 fathoms, and deepened the water soon after to 27 fathoms. This bank in lat. 6° 14′ N., and long. 52° 51′ W. requires examination, as there may be much less water over it.

From these remarks it will appear plain that a vessel bound from the West India islands to Cayenne should stand well to the northward, and beat to windward, to the northward of the parallel of Barbados until sure of fetching Cape North. In this track the current is slack, being not a mile an hour and often less. I do not think a ship could make the inshore passage under five or six weeks, besides being exposed to a coast apparently quite unsurveyed.

We anchored in Cayenne roads on the 9th June, a small rock named L'Enfant Perdu bearing S. 7° E., three and a quarter miles; the town on the same bearings about nine miles off, in $3\frac{1}{4}$ fathoms water on a flat mud bank, which extends four or five miles from the coast, and north-west nearly as far as the Devil islands. Cayenne may easily be known by the several isles about it. La Mere, La Pere, and Malingre to the eastward are high rocks, whilst the Salut or Devil isles to the north-west are high and of some size. The town is built at the entrance of the river, on the north-west part of the island; and is immediately recognised by its barracks, fort, and flagstaff. The hills of Remontabo and Tiger are about 450 feet high, and can be seen six or eight leagues off. The coast to the westward is broken into hummocks of no great height. The flood tide where we anchored sets N.W., ebb N.N.E. 2′ an hour, high water full and change 3h. 40m.; variation of needle 5° E.

There is a dangerous bay at the entrance of the river having in

spring tides seventeen or eighteen feet of water over it; but the tides being neap when we were there, we could not carry the ship into the river. The flood tide runs slowly into the river, but the ebb sets strongly out to N.N.W., causing a confused, and to boats a dangerous sea on the bar.

Whilst we lay in the roads there was a French troop-ship lying close to us; she had been a 36-gun frigate, and drew eighteen or nineteen feet water. I observed her to be aground at each low water. Her first lieutenant, who visited the *Electra*, told me when they first came to Cayenne, they had anchored off La Malingre, but found the ship to roll so violently as to endanger the safety of her masts, and they preferred grounding at low water on the mud bank to remaining where they had been.

The King's pilot whom the governor very kindly sent out to us also informed me, that on this bank the rollers never break; whereas in the winter months November, December, and January it would be highly dangerous to anchor a ship east of the town, in consequence of these rollers. The further in you can get on the bank the less roll you will have, and a ship can receive no damage if she do touch, as it is all a soft mud.

The Barrier Reef, Australia.—Directions for Entering.

By Capt. Blackwood, H.M.S. Fly.

[We have already given in our September number (p. 537.) Capt. Blackwood's description of the Barrier reef in the vicinity of Raine island, but having received the *Sydney Gazette*, with a more complete account of it accompanied with directions for ships to enter the Barrier, we transfer it as follows to our own pages.]

From Lizard island, (the peak of which being 1200 feet in height, visible a distance of twenty-five miles and more, in clear weather, from a ship's deck, is in 14° 39′ 28″ S. lat., and 145° 30′ 45″ E. long.,) the Great Barrier Reef is distant eleven miles in a due east direction; from the parallel of this island the reef trends away to the north-west and west, without a practicable, or, at least, a safe opening for ships, till the meridian of Cape Melville be reached, when in the latitude of 13° 59′ 20″ S., long. 144° 34′ 40″ E., three good openings, one of which is nearly half a mile wide, will be discerned.

From the centre one of these openings, (and they are about a mile distant from each other,) Cape Melville, a very remarkable, rocky headland, bears south ten miles distant. Latitude of opening, 13° 59′ 20″ S., long. 144° 34′ 40″ E.

The reef, which appears to follow the trend of the coast, now runs in a N.N.W. direction to the latitude of 13° 27′ S., long. 144° 8′ E., in which position is a good opening of three miles wide, from which Cape Sidmouth bears W.b.N. twenty-seven miles, and in clear weather is distinctly visible.

The reef now takes a more northerly direction, running due north for twenty-three miles without a good opening, when in the latitude of 13° 3′ S., long. 144° E., another opening of the same extent nearly, viz. three miles as the one above-named exists. From this entrance, Cape Direction bears N.W.b.W. ½ W. twenty-five miles distant, indeed the land, as far to the northward as 12° 20′ S., is of considerable height, and may generally be made out from the Barrier Reef when in that parallel; this also may serve as a guide for a ship that may have failed in obtaining an observation for latitude, as north of that parallel the reef stretches out to a greater distance from the land, which is no longer visible from the Barrier.

From 13° 3′ S., the Barrier runs nearly due north for forty miles without an opening, and then trends to the N.N.E., when, in the latitude of 12° 22′ S., will be seen the wreck of the "Ferguson."

This ship will probably exist as a useful beacon for many years, as she is thrown completely on the top of the reef.

From 12° 22′ S., the reef trends away to the N.N.E. for eighteen miles, without a good opening, when that distance being run, some remarkable black rocks (which at low water show about twelve feet in height) will be seen in 12° 12′ S. lat., 144° E. long.

These rocks are the southern point of an extensive bay in the reefs, and if a ship clearly makes out her position by good latitude observations, she may haul up to the south-west, rounding the rocks about half a mile from the reef, and will shortly be in soundings.

This is a good entrance of three miles wide, but a careful mast-head look out must be kept, as several sunken coral patches exist shortly within the line of soundings; they are distinctly visible from the mast-head, till 2 or 3 o'clock in the afternoon; and it may here be observed, that as a ship steers for the land from any of the Barrier entrances, she cannot exercise too much caution in reducing sail and speed, when in the afternoon, as the sun gets ahead, the glare will hinder coral patches, (which up to that time are clearly visible) from being made out.

It would be safer to anchor after that time, but as that is not always necessary, I have found that with a strong glare, a look-out man on deck, or half way up the fore rigging, will often see a coral patch better than the mast-head man, whose eyes will probably be dazzled by the glittering of the water.

From this entrance (Black Rocks,) Sir Charles Hardy's Isles bear N.W.b.W. thirty miles distant.

In this bay (Wreck Bay,) in the latitude of 12° 6′ S., is Nimrod's entrance, it is narrow but safe.

The wreck of the ship "Martha Ridgway," bears south four miles from it, and as it may probably remain for some years on the reef, may serve as a good guide for this entrance.

It will be recollected that a ship steering in for Nimrod's entrance will be completely embayed, and as there are several narrow but safe channels through the barrier, both north and south of Nimrod's entrance, she should take any one of them in preference to attempting to beat out of the bay, which, with a contrary tide, might prove fatal.

The northern point of Wreck Bay, which has hitherto been consi-

dered a detached reef, is in lat. 12° 7′ S., and the southern extreme of the great detached reef, bears from it N.E.b.N. twenty miles distant.

From 12° 7′ S. the reef runs due north for three miles, and then trends away to the N.N.W., having a small detached reef a couple of miles from the main body.

Stead's Passage, hitherto much used, is safe but narrow, it is in lat. 11° 55′ S., long. 143° 53′ E., from it Sir Charles Hardy's centre island bears due west twenty-one miles distant. As however a ship taking this entrance will have several detached reefs outside of her and in hazy weather might have a difficulty in clearly making out her position, I would strongly recommend steering for the passage by Raine island, which is broad and clear, and on which Government are about to erect a Beacon this season. H.M. ship *Fly*, will also be at anchor in the vicinity.

A ship intending to enter the Barrier by the passage of Raine island, should shape a course so as to make the southern extreme of a large detached horse shoe reef in lat. 11° 50′ S., long. 144° 11′ E.

While outside the reefs a current of at least one mile per hour, setting to the north-west should be allowed for, and no means omitted of ascertaining the ship's position in latitude, as should this entrance be passed during the night, the only remaining practicable passage (till Murray island be reached) is the Pandora, eight miles due north of Raine island.

Having sighted the breakers which may be safely approached within a short mile, a north (compass) course will be steered along the outer edge of this detached reef, when this distance being run, Raine island will be seen, and a N.W.b.N. course should be shaped for it.

Raine island may be distinguished by having a quantity of coarse green vegetation on it which shows plainly, and serves to distinguish it from Pandora sand bank, on which there is no vegetation whatever.

A reef which always breaks extends from its south-east end a good mile, and both islet and reef may be boldly approached.

Being twenty feet above the sea level, and nearly a mile in circumference, it can be just seen from the mast head of a 500 ton ship, at a distance of ten miles. Its north-west extreme is in lat. 11° 35′ 10″ S., long. 144° 6′ E,, measured from Fort Macquarie, Sydney, and considering the latter position to be in 151° 14′ 54″ E., from Greenwich. The island being clearly discerned and brought to bear north, two or three miles distant, a S.W.b.W. ½ W., course for nine miles will lead into soundings of 32 fathoms, coarse coral, and the reefs will have been entered by a passage of four miles and a half wide.

There is also a good channel, of two miles and a half in width, on the northern side of Raine island. In taking this northern channel, the north-west extreme of the island may be approached within a mile, and a south-west course steered when at that distance from it, by which means three or four sunken patches, having 3 fathoms on them, and bearing W. ½ N. four miles from the island will be avoided. A good mast head look out must be kept when entering the line of soundings, or nine miles after passing Raine island, as one or two sunken patches exist, on which the least water found was 2 fathoms.

If the reefs are entered early in the day a S.W.b.W. course for

thirty miles will lead to Sir Charles Hardy's centre island, in lat. 11° 54′ 40″ S., long. 144° 11′ E. Should the entrance by Raine island be passed, Pandora Passage bearing due north eight miles from Raine island may be taken; it is quite safe, is two miles in width, and may be distinguished by a sand bank on its southern extreme, on which there is no vegetation whatever.

This sand bank should be rounded within a short quarter of a mile, and the ship entering should haul up to S.S.W., which will lead into good anchorage. The latitude of it is 11° 26′ 40″ S., long. 144° 5′ 20″ E.; From Pandora sandbank to Murray island, in latitude 9° 5′ S., there is no opening that can be recommended for shipping, the Barrier running N.b.W. and N.N.W. in one unbroken line of breakers for nearly ninety miles.. Should a ship enter by Raine island, the island of Mount Adolphus will bear N. 55° W. 100 miles, and although the channel has not been surveyed or the best direct track laid down for it; yet, having twice run across from the Barrier reef to Mount Adolphus, and having found the passage in different parts comparatively clear, by taking the precaution of once or twice anchoring, I believe that the dangers of Torres Straits may be surmounted in three days from the time of entering the Barrier at Raine island.

Mount Adolphus (which is situated off the northern Cape of New Holland,) has a good anchorage on its western side in a well sheltered bay, the southern point of which may be closely rounded in 8 fathoms, for a sandy spit (on which the least water in one small patch we found to be 2¼ fathoms, and having 3 fathoms in all other parts) at low water extends nearly across the entrance of the bay, leaving a good channel of deep water both north and south of the spit into the anchorage. No fresh water was found on the island. At Raine island it is high water at full and change at 10 P.M., and the tide rises from 10 to 12 feet, running at the springs nearly three miles per hour. If sailing late in the evening, caution must be exercised by a ship steering in by Raine island, as the flood tide does not set directly into the Bay formed by the surrounding reefs, as in the other channels.* The variation of the compass observed on Raine island was 4° 30′ east.

Ancient Cannon.

The Isle of Walney (or *Waughney*, as it was called by the Saxons,) lies upon the northern side and at the entrance of Morecambe Bay adjoining that part of the county Palatine of Lancaster called Furness, and is about twelve miles in length by one in breadth. It appears formerly to have been covered with trees, and in ancient charters is called "The Forest of Walney;" but at the present day it is entirely under tillage, and no trees of any magnitude are now to be found. It is to be observed, that it is an island only at high tide; and, in gene-

* Outside the Barrier no anchorage is to be obtained.

ral, when the waters are out, the sands may be crossed to the main land, throughout the greater part of its length. Near the south end of Walney is another small island, called Peel or Pile of Fouldrey, on which stand the extensive remains of an ancient castle, built by the Abbots of Furness, towards the end of the reign of Edward the Second. During the ordinary spring tides the waters recede so far that the channel between Walney and Peel is quite dry, so that persons may pass over on foot; nevertheless, on the eastern side of the latter island there is a safe and commodious harbour, accessible at all times to vessels of no great draught of water. A considerable part of the district now called Furness, including these islands, was originally granted by King Stephen to St. Mary's Abbey, the stupendous ruins of which still remaining (at a distance of four miles from the Pile of Fouldrey) bear testimony to the wealth and taste of its former possessors. The Abbots of Furness built the castle of Peel partly, it is supposed, as a place of refuge in troublous times, and partly as a fortress for the safeguard of the haven which it commands. According to their ancient tenures the vassals of the abbey were bound to provide for the defence of this castle; and after the dissolution of the religious houses, when this property came into the possession of the Crown, this service was still demanded. Even in the reign of Queen Elizabeth, when a decree passed granting important privileges to the customary tenants of Furness (and particularly to those in the Isle of Walney), it was expressly stipulated that they should, at their own costs and charges, have, at all times, in readiness *threescore* able men, horsed, harnessed, and weaponed, according to the Statue of Armour, to serve in the wars against the Queen's enemies, or "for the defence of the haven and castle called the Pile of Fouldrey."

The place at which the various relics, which form the subject of this memoir, have been found, is on the western shore of the Isle of Walney, between high and low water mark; at a distance of two miles from its southern extremity, and at about the same distance, in a straight line, from the Pile of Fouldrey. During a residence of several months last summer in this remote, but prosperous and happy island, I learned that a tradition had been handed down for many generations, to the effect that, in very early times, a ship of war, or vessel laden with warlike stores, had been wrecked at this spot. In consequence of the salubrity of the air, and the temperate habits of the people, remarkable instances of longevity are to be met with, and I was enabled, through one family, to trace back this tradition for between two and three hundred years. A man, by name Nixon, died several years ago, at the age of ninety-seven. His father attained the same age, and had frequently told his son that, when he was a boy, the oldest people then living knew nothing of the disaster, except what they had learned from preceding generations. In the course of my enquiries I ascertained that, at different times, during a long series of years, a number of clumsy pieces of ordnance, and other curiosities, had been found upon the shore, the greater part of which, unfortunately, had either been converted into implements of husbandry or otherwise disposed of. An opinion generally prevailed among the islanders that the vessel itself still remained buried in the sands; and having at the time a number of men employed in forming

defences against the sea, I determined upon making an attempt to raise her. A piece of timber, which stood in a vertical position, and just appeared above the sand, was confidently pointed out as the stem or stern post of the wreck; and here, when the tides would admit, operations were commenced and carried on from day to day. After removing the sand and shingle to a depth of two feet, a strong blue clay was discovered, in which the treasure was supposed to lie embedded. This was carefully searched in all directions to its extreme depth; but no part of the wreck could be found, except some detached planks and timbers scattered up and down, and a few iron bolts, all in a state of decomposition and decay. That the investigation was made at the right spot, is evident, from the fact, that a great number of the objects enumerated below were found during the excavations; and all agreed in pointing this out as the place where all former discoveries had been made. I feel, therefore, perfectly satisfied that no considerable portion of the wreck exists; and, in fact, the strongest ship in the navy could not for any length of time withstand the force of the waves which the strong westerly winds, sweeping across the Irish sea, drive with tremendous violence against this exposed coast. There is, however, an old man, by name Haslem, still living, who assures me that he has frequently seen parts of the wreck protruding through the clay; and that, several years ago, he obtained possession of a large fragment consisting of several planks and timbers bolted together in their original form. From the dimensions which he gave, the vessel must have been of very inconsiderable strength and burthen; the planks and timbers corresponding with those which would be employed now-a-days in the building of craft of less than *fifty* tons.

I shall now proceed to enumerate and describe the various objects discovered, and will commence with those represented in the accompanying engravings which are now in my possession.

No. 1. When first discovered, was nearly perfect, and was about ten feet in length. The breech was in the middle; at which part the piece was raised and strengthened by additional bands of iron. It had two touch-holes, one on either side of the breech, and fired right and left. Near to each muzzle on the upper side was a ring, supposed to be for the purpose of suspending it. This piece is altogether made of hammered iron, and is constructed upon the principle of the oldest guns of which we have any account. The tube, or inner lining, consists of three plates of iron, of the third of an inch in thickness, disposed in a cylindrical form, and placed longitudinally, side by side, like the staves of a cask, but, apparently, not forged or welded together. These are strengthened and held together by means of bands or hoops, which have been driven on one after the other, and are overbound at their junction by strong iron rings. This gun was found several years since, and was carried to a forge to be wrought up; but, when placed in the fire, it mouldered away; and being found unsuitable for any purpose, was thrown aside. The remnant subsequently came into the possession of Roger Taylor, Esq., of Finsthwaite House, Lancashire, who (understanding that my intention was to institute an inquiry into the historical event connected with these remains, and afterwards to place them

in one of the national repositories,) in the kindest manner placed this valuable relic and several other objects at my disposal.

No. 2. Is two feet in length and of 2 inches calibre. It is also of wrought iron, and formed of bars welded together, and hooped; has two strong rings to handle it by, but no trunnions or cascabel. There is a cast iron ball suited to its calibre.

Nos. 3. and 4. are also of wrought iron, but without hoops. They are supposed to be chambers or moveable breeches, which were much used in early times. They contained the charge of gunpowder, and were fitted into the breech of iron tubes which served to give direction to the balls. By degrees these chambers came to be used as independent pieces for throwing small shot. They are of great weight and strength, and prove that at the time of their employment very exaggerated ideas of the power of gunpowder were entertained.

Three guns nearly resembling No. 2. One was carried off by a Scotch cruizer; another exists at Biggar in Walney, in the shape of a pair of axletrees.

Three chambers. One was found to contain a charge of gunpowder and a wadding of oakum.

Two small iron tubes, 15 and 18 inches long. These were described as parts of musket barrels, but it is more probable they were the earliest form of *hand cannon*.

I have besides, in my possession, a dozen balls of stone and iron of different sizes:—

Six of granite, varying in diameter from 6 to 3½ inches.

One of grey sandstone, 6 inches diameter.

One of clay ironstone, 6 inches in diameter.

One ball of *hammered* iron, 5½ inches, and weighing 18lbs.

One cast iron, 2 inches.

One cast iron, 1 inch; it was found enveloped in folds of lead to increase its size or weight.

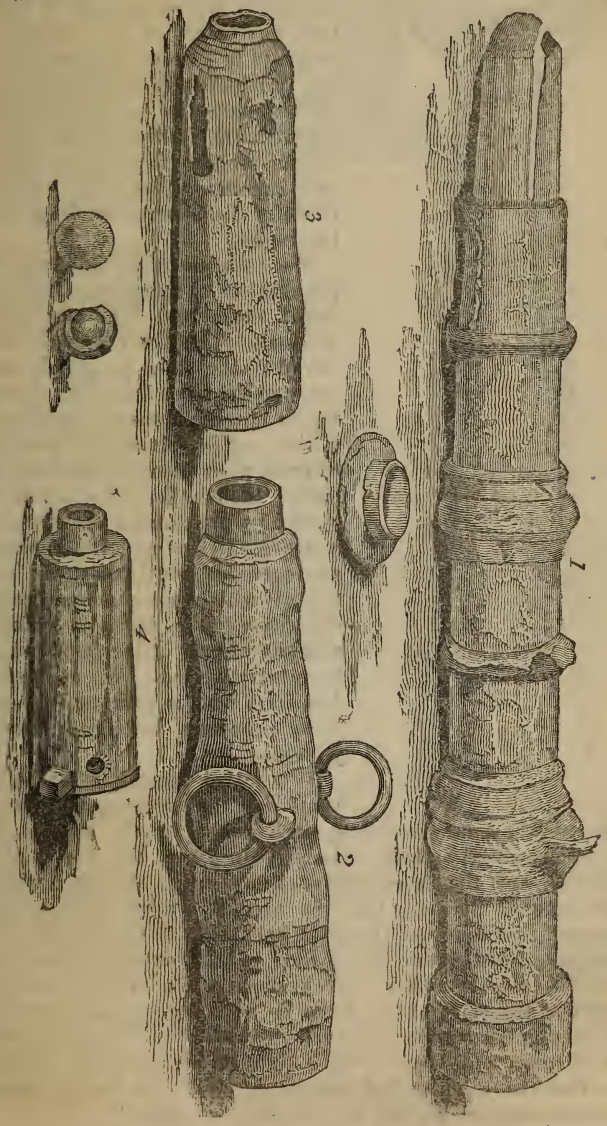
Two balls, supposed to be lead, but when opened the kernel of one was discovered to be a *flint pebble*, and of the other a *square* piece of hammered iron.

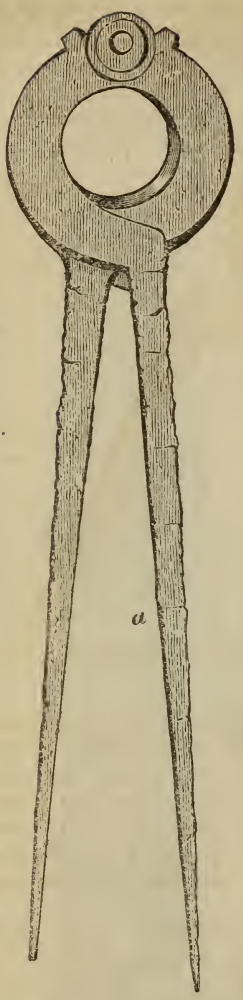
Two old cutlasses.

A pair of curious brass compasses, or dividers, ingeniously contrived both to open and shut by pressure.

It is to be observed, that the whole of the relics just enumerated have been found within comparatively a very few years, and it is only reasonable to suppose, that during the several centuries which have elapsed since this disaster happened, a great number of objects, of which no trace now exists, have been carried away or destroyed. I have in my possession no less than six or seven balls of stone of different sizes, not suitable for any one of the pieces yet discovered; and allowing that for every class of bullets there was a gun of corresponding calibre, the quantity of *material* originally deposited must have been very great. It happens, too, that the largest pieces are those which are not forthcoming, and I account for their disappearance as follows:—I am of opinion that the pieces, for which the larger stone balls were intended, were nothing more than open tubes to which the chambers or moveable breeches were adapted. As the gunpowder would thus be exploded in

and its violent action confined to the *chambers,* there would be no necessity for making these *tubes,* which merely served to give direction to the bullets, of any great strength or weight. They would probably therefore, be formed of thin plates of iron, which would soon decay or being light would lie upon the surface, and so be washed away, whilst the chambers and small heavy pieces would sink into the clay, and be preserved.





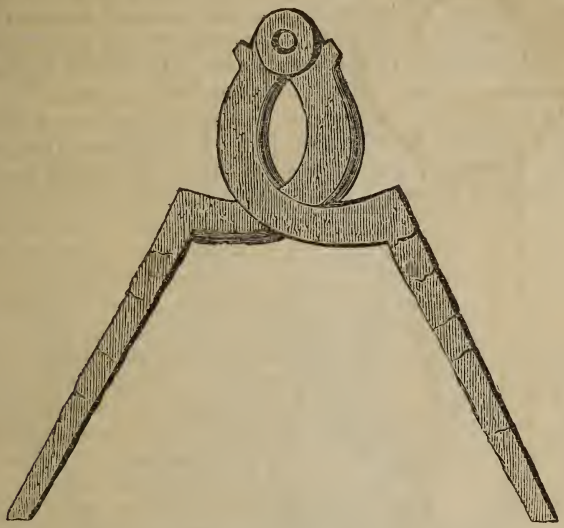
The engravings are the size of the original.

The compasses alluded to in the foregoing paper, which we have taken from one by Mr. Archibald in the Archœologia were sent to Sir John Barrow, Secretary to the Admiralty, and are now deposited in the Hydrographic Office. The title pages of old books of charts abound in representations of this primitive instrument of our forefathers, and they are to be seen particularly in the old Dutch Atlases which were published in abundance by —— who in conformity with the fashion of the day embellished the frontispieces of these works with representations of the cross staff, the circle of the sphere, the lead, and even the rudder.

We have preserved for our pages a representation of these compasses in the annexed engraving, the same size as the original. The first represents them entirely in the state in which they now are, and the second displays them opened for the purpose of shewing the contrivance of the handle. It will be seen that the circular parts being double and working inside each other, the compasses are opened by pressure on the circular part, and closed by pressure also beneath it;—an ingenious contrivance, the preservation of which some persons who have experienced the difficulty of opening a stiff jointed pair of compasses might have frequently wished. We understand that Mr. Cary who is making a fac-simile of these compasses, has also preserved the pattern.

It is rather remarkable that the invention of the rudder and the use of gunpowder were not very far from each other in the stream of time; those two essential articles of a ship's furniture, the one to direct her movements, and the other to give them energy. And then with respect to the compass, Mr. Cruden, the learned Author of the History of Gravesend is of opinion, that the apparatus at the mastheads of the vessels represented in our last number p. 622, extracted from his valuable work, was intended "for firelight and a vane or weathercock. The great antiquity of the latter he says, the *coronis versatilis venti index* is unquestionable, but here it appears to be appropriated to a naval purpose, and there being a light at the masthead, conveys evidence that the compass had been made available for the extension of maritime enterprise beyond mere coasting voyages."

A pair of antique compasses, supposed to be of the time of Richard the Second (1377-99) found on the shore of the Isle of Walney, Lancashire, by C. D. Archibald, Esq. Preserved in the Hydrographic Office of the Admiralty.



For the sake of convenience the figure is broken off at *a* in the first engraving.

We shall not here enter upon these subjects. We have shewn that the rudder was in use in 1340, the compass no doubt was long before it. We shall however leave these things for the present, and conclude this notice of antiquities with a further extract from the History of Gravesend in the annexed drawings of ships as they were in the fifteenth century, shewing the early application of artillery at sea, in conjunction with archery, and the form of vessels some few years subsequent to the time of which we have been speaking.

There is extant a pictorial description of ships of that period, which conveys some curious illustrations of their form and equipment: it is in a manuscript,* relating to the principal events in the life of Richard Beauchamp, Earl of Warwick, written by John Rous, a Chantry Priest of Guy's Cliff, in the County of Warwick. They are introduced in the manuscript in chronological order; but the two following copies are placed with reference to the progress of improvement in marine architecture they display.

The first sketch shows that, when cannons were introduced into ships, archers and cross-bow-men, were not immediately discontinued in naval warfare.

The other represents a ship rigged and armed, having a cabin or

* Cottonian MS. Julius E., IV.

round-house, such as is not found in more ancient vessels.* The bulwark or parapet with apertures, through which cannons are pointed, and the larger opening or port-hole in the side near the stern of the vessel, are very striking novelties. The sail† is braced up for sailing on a wind, contrary to the earlier practice of sailing always before the wind. The streamer does not fly in accordance with the angle of the sail; but this anomaly, in the performance of the priest of Guy's Cliff, may be supposed to have arisen from his desire to make the best display of the cross of St. George, the Ensign of England, and the bear and ragged staff, the device of the Earl of Warwick. This streamer has had its historian,‡ and the account given of it supplies the date when the original was made and the ship equipped.

" These be the parcells that Will. Seburg, citizen and peyntour of London, hath delivered in the month of Juyll (July) the xv. year of the reign of King Harry the Sext, to John Ray, taillour of the same city, for the use and stuff of my Lord Warwick.

* * * *

* See the description of the ship in which the Bastard of Burgundy arrived at Gravesend, in the year 1647, p. 127 of Cruden's history of Gravesend.

† This vessel has a main-mast, and a mizen-mast; and another sketch of a vessel in the same volume, describes one with a foremast; therefore it must be concluded that some ships had three masts, at the period when the MS. of Rous was written.

‡ Dugdale's Warwickshire, vol. i. p. 408.

" Item, for a grete Stremour* for the ship, of xl. yerdes lenght, and vij. yerdes in brede, with a grete Bear and Gryfon holding a ragged staff, poudrid full of ragged staves, and for a grete crosse of St. George, for the lymmyng and portraying . 1 6 8
" Item, for a Guyton† for the shippe, of viij. yerdes long, poudrid full of ragged staves, for the lymmyng and workmanship . 0 2 0
" Item, iij. Pennons of satyn entreteylled with ragged staves, for the lymmyng full of ragged staves, price the piece, ijs. . 3 6‡ 0

The *gryfon*, mentioned in this account, does not appear on the streamer; but probably it was painted on the side that is not seen; and with this exception, the streamer of the ship is identified with that described in the bill, and shows that the ship was equipped in July 1437. This, however, does not prove that the vessel was constructed at that time; for Rous might, at a later period, have copied a

* Streamer. " Besides Banners and Standards, Guidehommes or Guydons, Pencils or Pennons and Streamers were likewise used; the streamer was confined to ships, and still exists in what is now called a pendant, which is very long and narrow, and in the upper part contains the cross of St. George," &c.—*Excerpta Historica*, p. 51. " Every Standard and Guydhomme to have in the chiefe the crosse of St. George, to be slitte at the ende, and to conteyne the crest or supporter, with the poesy, worde, and devise, of the owner."—*Ibid.*

† A corruption of guydem or guydon. See preceding note.

‡ Dugdale's Warwickshire, vol. i. p. 408.

drawing previously made, or have given the representation of one that existed when the manuscript was written and illustrated. He died in the year 1491; and this date establishes the interesting fact, that, if port-holes in the sides of ships had not then been formed, openings for guns in the bulwarks were in use, some years at least before the time when, it is said, they were invented by the French.

It is evident that great improvements had been made in marine architecture; the slightest glance being sufficient to discover the difference between vessels with a single mast each, and no deck, as used in the preceding age, and that class which is represented in the delineation by John Rous. The art of rigging had not kept pace with that of the structure of the vessel, though it is supposed that top-masts and top-sails were added to the equipment, before the time when Rous died.

The Mariners' Compass.

Sir.—My papers on the Mariners' Compass appear to have given a new impulse to compass making! The "snappers up of unconsidered trifles" who deal in mechanical and philosophical intrigue are busily employed in devising new modes of mounting the magnetic needle, but as many of these plans will neither improve the Mariners' compass, nor *advance the progress of nautical science*, I intend this communication for the information and guidance of mechanical philosophers in general, and compass-makers in particular.

I have shewn, (and no one has attempted to disprove it,) that a compass needle when magnetised and suspended in the usual way will have its *centre of gravity on one side of its pivot* in every part of the world, except upon the magnetic equator, and that the *heaviest* end of the needle will swing to *leeward*, with every roll of the ship. This is the mechanical error of the compass!

I have also shewn, that the induced magnetism of the iron in a vessel will have its poles in a state of transit as the ship changes her seat in the water by the action of the wind on her sails, or the waves on her hull, and this change in the *position* of the poles in the ship's iron will act upon the compass needle, and either cause it to diverge from its meridian, or to oscillate on either side of it. There is consequently a mechanical and a magnetical disturbance to which a ship's compass is liable in a rough sea. I have shewn how the mechanical disturbance may be rectified, and will no doubt have an opportunity of exhibiting how the other and more important correction may be applied.

A dipping needle requires to be very nicely poised upon an axis passing *through* its centre of gravity: the axis is placed in a horizontal position and at right angles to the direction of the magnetic meridian. In this position, the needle when magnetised is free to *dip* through a vertical arc, but *not free* to oscillate in a horizontal plane. Change now the axis of such a needle from a horizontal to a *vertical* position, the needle will no longer be a dipping, but a *horizontal needle*: do this, and you adopt my plan, do it in any way you please! all that you

have to do is to pass the axis of rotation of your compass needle and its appurtenances, *directly through the common centre of gravity before you put any magnetism into the needle!* You may accomplish this object in a variety of ways, as far as mechanical contrivances are concerned, and probably without presenting anything absolutely new! Make this very nice and delicate adjustment! Make your needle a powerful and permanent magnet, and you will certainly make a good compass!

In the Polytechnic Review for July, 1844, there appears an article "On the aberrations of the Mariners' compass on board ship." The writer it seems, has read my pages in the *Nautical* and certainly without sufficient attention. I entirely disapprove of a multitude of needles upon a single compass card!! This critic has neither read my papers with sufficient attention, nor has she clearly understood what she intended to say! Her remarks on magnetism are not put into such a form as to call for serious refutation. I would by no means discourage Mrs. Borrow from following up her scientific pursuits: she is a lady of considerable ability, and deserves encouragement. She is however wrong in her arithmetic, when at page 41 she tells us that a velocity of twenty feet in a second when "carried out" will amount to $13\frac{3}{4}$ miles per hour! Why Sir, when a ship is going at the rate of twenty feet in a second, she is actually going at a less rate than twelve knots per hour.

My fair critic is equally at fault in her Hydrostatics, and opinions about the height and motion of waves at sea! She thinks and gravely asserts that, the descent of a wave cannot be more than ten feet in a second, and that water can only fall through the atmosphere a distance of sixteen feet in the first second! In making this hasty statement, the writer overlooked the fact that although the vertical height through which a falling body descends in the first second, amounts to sixteen feet, yet its *terminal velocity* will be at the rate of thirty-two feet per second! This is a subject which has never yet been thoroughly discussed, and I will "condescend to a few *facts and figures*" relative to waves at sea. These will furnish data for scientific speculation!

1st. The atmosphere presses with an elastic force of about 2000lbs. upon every superficial foot of the surface of a wave, and this downward pressure is in addition to the weight of the water forming the wave.

2nd. It has been ascertained and recorded, that waves at sea travel along at the rate of forty-six feet in a second of time, or twenty-seven miles per hour.

3rd. That the elevation of such a wave was found to be twenty-seven feet *above,* and its depression twenty-seven feet below the mean sea level.

4th. That the waves, in a storm have reached the lanthorn on the top of the Eddystone light-house.

5th. That the Captain and officers of H.M.S. *Inconstant* stood on that ship's quarter deck, when she was "scudding" before the wind with her *stern* upon the top and her *bow* in the hollow between two adjacent waves, and they could see the waves ahead by looking *over the fore-top-sail-yard.*

6th. That the *Inconstant's* fore-top-sail yard when lowered down to

the cap, was sixty-two feet above the forecastle deck, and seventy-seven feet above the ship's water line.

7th. That the atmosphere is capable of driving a train of waggons upon a railroad, and up an inclined plane at the rate of 100 feet per second, and that this enormous elastic agency resting upon the surface of an agitated sea, may combine with the force of gravity, and thereby modify the motion of the waves.

In the Transactions of the Royal Society of Edinburgh for the year 1834, there is an able article upon the "Oscillations of the Horizontal needle". The author of this communication, is a man of acknowledged talent, and a scientific experimentalist, he has however been led into error, by resting upon the authority of distinguished names rather than upon the result of his own investigation. In the paper referred to, the author describes his mode of adjusting the needle, and the necessity of making both arms of the same length and weight. He then fitted two equal and similar sliding weights, one on each arm, equi-distant from the centre of the needle, in order to correct the horizontality of the needle after being magnetised.

Page 10, Sect. 18, "The bar being suspended in this way, and the sliders placed at first in their original position, the inclination due to the polarity is corrected by moving one of the sliders towards and the other from the centre, by nearly an equal quantity. The distances through which they require to be moved, in order to correct the inclination (dip) are so little that we may consider any error arising from a change in the angular inertia of the mass, as being indefinitely small, since the sliders are moved in opposite directions, should it, however be considered requisite in any extreme case, we may find a series of points on each side the centre in some of which the horizontal position may be obtained, and which would correspond to the same angular inertia with mathematical precision, since we have only to find a series of points, the sums of the squares of the distances of any two of which, from the centre of the bar, taking one on each side, give a constant quantity, the resistance of the sliders to motion being really as the particles themselves, multiplied into the squares of these distances from the axis of motion."

The thing required to be done, was to preserve the *horizontality* of the needle, and at the same time to make the *angular inertia* of the arms of the needle, on each side of the silk filament or point upon which it was suspended perfectly equal. The mode is to move one of the sliders *towards*, and the other *from* the centre, by nearly an equal quantity, that is to say: to move the slide upon the north arm a little *nearer* to the centre, and the one upon the south arm a little *farther* from the centre; therefore both weights were to be moved a little farther toward the south end of the needle to bring it to the horizontal position, and therefore, both sliders had to be moved in the same direction! We are again told, that if mathematical precision be required, we have only to find two points in the needle, one on each side, where if we *square* the distances of the sliders from the centre of motion, and multiply the products by the weights themselves, we shall have an equality! If for example the sliders were each ten grains in weight and placed each at

two inches or $\frac{20}{10}$ inch from the centre and that the needle *before being magnetised* was found to be in an horizontal position, but after being magnetised and pointing to the north, it *dipped* so as to require the weights to be slid, "one a little nearer to, and the other farther from the centre."

Let one be moved $\frac{4}{10}$ inches nearer to, and the other $\frac{4}{10}$ farther from the centre to bring back the needle from its dipping position. We shall then have the relative distances of the weights from the centre of motion $\frac{24}{10}$ and $\frac{16}{10}$ inches; all other conditions remaining the same. Let now the process recommended be followed out by squaring the distances and multiplying the weights, that is $24^2 \times 10 = 16^2 \times 10$, or 5760 $=$2560 which is absurd! It is *evident* that in such an example the angular inertia of the arms of the needle would not be equal; there would be a difference of 3200 grains *relatively*. It is also evident that any attempt to correct a ship's compass on *such principles* will utterly fail. But as such attempts have been made, I have been induced to take notice of the principles I have discussed in order to give an opportunity to those who adopt the practice to give proofs (if they can) of its correctness.

I am, Sir, &c.,

WILLIAM WALKER.

Bovisand, Oct. 7th, 1844.

NAUTICAL MEMS.

(Continued from page 624.)

5. *The Jib.*—A jib is a rising sail, and the reason of a ship pitching more with that sail set than when not in use, is,—not because it depresses her bow, but that it raises her higher out of the water, and, consequently, she has a greater distance to fall before the water receives her bow.

6. *Masts.*—A ship's masts should be perfectly upright to produce the greatest head-way.

7. *Evolutions in chase.*—Tack always when the chase is a beam to windward, as she must then keep her wind, and cannot bear away without the risk of being speedily captured.

In chasing to leeward, be careful to keep the chase always at the same bearing, as that will be the shortest run you can make.

When a superior to leeward is in chase of you, keep the wind unless she goes upon the other tack so far as to allow of your bearing away; which, however, must not be done but when the chances are greatly in your favour, and even then, by degrees only, as bearing directly away will shorten the distance between you and the chaser. When chased by a superior to windward, take his bearing, and steer the direct opposite course.

8. *Mooring.*—Always moor with your best bower anchor and cable to the point from which the strongest wind is expected.

9. *Taking in sail when blowing hard.*—Opinions are very much divided about taking in sails when blowing hard. In my own I should think it best to start the weather clue first, having the weather brace manned, and to ease down the lee clue when setting sails.

In unbending a sail when blowing hard, it should be furled, and when the gaskets are passed, cast off the robins, and tie them round the sail, and thus it is snugly made up for sending upon deck.

10. *To bend a top-sail when blowing hard.*—Having bowline bridles, earrings, &c., bent, I would roll the sail outwards from the head downwards to the close reef, and tie every point; then lay the clues on the after part of the sail, close up to the reef, and in that position roll from the foot outwards till I met the close reef; and then stop the sail round with spun yarn: I would then rack the tie well up, and send the sail into the top in a single bight, so that the lee yard arm would be taken round to the lee side of the top with ease; bend the reef tackles and reeve the clue-lines; haul out on the former, and round down on the latter, then bend the sail with the reef points as fast as they can be cast off, first passing a turn or two of each gasket to take the weight of the sail off the points. In a case of necessity when this is done, the bunt-lines must be bent at some better opportunity. There are probably better ways of doing this than the one now laid down.

The Samarang and the Pirates of Gillolo.

H.M.S. Samarang, at sea, 18th June, 1844.

On the morning of the 3rd, we left the ship with barge and gig, the former with her gun and rocket tube, with Capt. Sir E. Belcher, Lieut. Baugh, Mr. Hooper, acting purser, Mr. Adams, assistant-surgeon, Messrs. Brown, mid, Marryat, vol. and McDougal, master's assistant.

We landed on the smallest of three islets, on the Gillolo shore and the tide being low, the gig could not cross the outer coral belt. Sir Edward here commenced his observations. In the mean time, about eight or ten natives unarmed, came cautiously down to us, but soon retired, having apparently satisfied themselves as to who we were. In our fancied security, the barge with her gun being within a few yards of us, we strolled about the immediate edge of the reef until noon, for the observation, which was hardly finished, when a most discordant yell from the woods immediately behind us, (about a quarter of a mile distant,) attracted our attention, and we saw two parties, of about forty advancing from two places with the intention of surrounding us. They were gorgeously attired in scarlet, and armed with bundles of arrows and spears. The chronometer and instruments were soon in the gig, on which they set up another hideous yell, and advanced at full speed. Our party consisting of four men and three officers, remained by the gig, and the four muskets were quickly prepared for action, the barge being hailed to cover us. The pirates hesitated, and it was some minutes before we commenced fire. At this juncture a large prahu came suddenly on our left pulling straight for the barge, but on making out

the gun in her bows, appeared much disconcerted and hoisted Dutch colours in addition to his own before displayed. He was warned off. He said he belonged to Tidore and wished to go into the river north of us. But he took the hint and moved off, and having repulsed our antagonists by musketry fired over them, (very mistaken lenity) we perceived the prahu edge round, and eventually he joined the pirates we had repulsed behind the island. A shot was fired over his head, but without inducing him to change his course. Our object however was to complete the observations, which detained us till 3 o'clock, when we embarked the instruments, we observed this and other prahus quitting the island for Gillolo.

Our captain determined on punishing these fellows for their treachery, and on rounding the end of the island Mr. Hooper was sent in the gig to burn the deserted village and prahus on the beach, which he effected in good style. Proceeding on in the barge, we came up with the first named prahu and a consort, just as their crews had or were deserting them, captured them and the aforesaid Dutch ensign, towed them to sea and burned them. To remain in this nest of pirates was unsafe, so we pulled about twenty miles to the southward, until past midnight, when we anchored in a very lonely bay, safe as we thought, from further molestation.

At 2h. we were saluted by the sound of gongs and other noises, and had scarcely time to clear for action, when five large piratical prahus, the leader pulling about fifty or sixty oars, with many men on the roofs, were close upon us. The leader was allowed to pass outside of us, when he asked in broken English "Who we were, and if we had a ship." We soon let him know that a British ship of war, which was ours, was outside, when they commenced their yells and antics, and throwing spears. No more time was to be lost in parley, so we served them out in another way. After a short interval, the four leading vessels were seen to haul off under our fire of round and canister, and make for the shore, where the crews deserted their vessels, under our repeated discharges of well-aimed musketry. We followed them, and fastening the gig's cable to each in turn, towed three of them off the reefs, and anchored them with their own gear well off shore. Mr. Hooper was left in charge of these vessels, to prevent their being recovered, but the next day this was effected by the natives swimming to them. The barge in pursuit of them, was led nearly two miles from the gig, and into a bay, where after a few rounds of ball and canister, they made for the shore, and were deserted in a sinking state. These two prahus were towed well to seaward, and an attempt made to set them on fire, but they would not burn. At dawn of day, five fresh prahus were seen advancing from where the gig was left, when fears were entertained lest she should be overpowed and the barge immediately made for them.

They were profusely decorated with banners, feathers on the prows, &c., and were evidently determined for a better fight. On our approach the customary yells and antics, were performed, but the 6-pounder with round and canister within pistol shot quieted them, and told fearfully. They soon made for the shore, but not without giving us some well aimed shot from their brass guns. One of their shot cut away the button of one of the seamen's muskets, and broke the barrel, and

lodged the button skin deep in the neck of a marine. Another wounded the captain, knocking the rocket tube out of his hand, and passed through one thigh into the other, where it remained. The shock knocked him and the tube overboard, but he caught hold of the gunwhale of the boat, and was assisted by the Assistant-Surgeon and Mr. Brown, into the stern-sheets. In the mean time our five opponents had run on shore, and were deserted, but five others were seen advancing from different directions, and one was within musket shot.

As the pirates seemed to thicken upon us, and our superiority with the 6-pounder would be gone at the first broadside, our ammunition being all but expended, it was determined by the captain to secure our retreat from whence we could send more force to complete the punishment of the pirates. The ship was courses down from us, and we reached her about ten. The barge was now despatched under the command of Lieut. Heard, with one cutter commanded by Lieut. Baugh, and the other by Mr. Loring, Acting-Master, with orders to go to the gig, and follow Mr. Hooper's orders, but not to land.

While all this was going on, Mr. Hooper, had employed himself in the gig, towing his three prizes to sea, and burning them. One of them, which was the largest, contained a considerable quantity of powder, and a large brass gun, too heavy for the gig. The slaughter on board these vessels had evidentally been considerable; a woman and a child, which were landed, were apparently natives of New Guinea.

The barge on arriving with Lieuteuant Heard at the late scene of action found about a dozen of these war prahus hauled up and moored within a creek. A dry reef prevented him getting nearer than 400 yards to them, but at this distance the fire from his guns and rockets, did considerable damage, each boat having fired more than twenty rounds. The pirates soon began firing with a large iron gun near a village as well as some smaller ones, but without any effect. Two empty prahus were then destroyed at the back of the village, and all being silenced the boats returned on board.

Pirates in the Indian Archipelago.—The Hague, Sept. 13.—We make the following extract from the Java papers received yesterday:—" Batavia, May 7.—Accounts from Macassar announce the arrival, on the 26th of February, of three boats, bringing the crews of the Belgian merchant brig, the Charles, Captain Hoed, which vessel, bound from Singapore to Manilla, ran aground off the river Coety, on the coast of Borneo, in the Macassar Straits, and was attacked by pirates. The captain, in his official report, states that on the 17th of February his vessel ran aground on the coast of Borneo, and at daybreak, pirates were seen coming out of the Coety, and that their number soon amounted to 24, who were speedily joined by others. The Captain and crew having in vain made every attempt to get the ship afloat, even throwing overboard part of the cargo, resolved to abandon the ship, which they did in three boats. The pirates approached under a heavy fire. The captain having convinced himself that nobody remained on board, left the ship with the last boat. Resistance, he says, was not to be thought of. The boats were followed for some time by the pirates, but happily escaped without any of the crew being killed or wounded. After ten days, contending with contrary wind and bad weather, and suffering much from the want of fresh water, they arrived on the 26th at Macassar, where they were received in the kindest manner by the local authorities."

A Tale of Isle St. Andrew.—*From an English Resident.*

Tradition says that the island of St. Andrew was discovered in 1688 by some English companions of the famous buccaneer Morgan, who having become dissatisfied with their leader, or from some other cause, left him at the island of Old Providence, and in a small vessel proceeded in search of new adventure and discovery towards the Mosquito shore. On the 30th of November the island was descried, and the party having landed and ascertained that it was uninhabited, proceeded on their voyage to the southward.

Their short visit however gave them so favourable an impression of its natural advantages and fertility, that soon afterwards they returned bringing with them some of the Valiente nation, and established themselves as possessors of the island. Their progeny are now the most numerous of the inhabitants, and deservedly numbered amongst the most respectable.

The descendants of the first settlers, and few English, Irish, and Scotch, who had gradually become inhabitants, continued in quiet and undisputed possession of the island until the year 1789. At this period it attracted the attention of the Spanish Goverment, and a frigate was despatched from Carthagena with directions to take immediate possession of the island and forcibly expel from it all the inhabitants. The officer who acted as interpreter on the occasion, of Irish descent, and partaking of the feelings of the inhabitants, urged their remonstrance so warmly with the captain of the frigate, that he finally succeeded in persuading him to delay the execution of that part of his instructions relative to their expulsion, until a representation should have been made to the Viceroy. For this purpose they selected Mr. Lawrence Thynne, an Irish resident, who proceeded in the frigate to Carthagena, with a memorial of their grievances, and a petition to be permitted to remain on the island.

The petition was graciously received by the Viceroy, but his assent to postpone the peremptory orders of the Government was promised only on the performance of certain conditions to be presented to them, the most weighty and important of which, perhaps, were, that they should immediately erect a place for religious worship, that their children thenceforward be brought up in the Roman Catholic faith, and after having attained the age of twelve years they should be sent to Carthagena for their education, at the expense of Government.

The islanders were principally Protestants, yet the conditions proposed came coupled with such a munificent bequest, and also with the threat of either immediate acceptance or expulsion and consequent beggary, that concession was to be expected. Besides it was promised by the Viceroy, that they should have the power of selecting their own governor, and that his authority by the concurrence of a council should extend to life and death, also the privilege of enacting their own local laws, and of conducting their public affairs in the English language, and many other little privileges, which induced them finally to accede to the terms, and they soon after became attached to the province of Carthagena. There were still a few who adhered to their original

faith, but they were never persecuted, and were permitted to enjoy the same privileges and immunities as their fellow islanders. Gratitude for the great service rendered to them by the kind and favorable intercession of Mr. O'Neille, the interpreter, who had been raised to the rank of Lieut.-Colonel, induced them to select him as their governor.

In a short time after he was sent to the island, bringing with him a detachment of soldiers, and a Roman Catholic Clergyman very soon followed; on assuming his functions which were both civil and military, the only act he enforced was that one dollar on every bale of cotton large and small, and even the levy of this small tax was but seldom exacted from the poorer classes, the officers and troops were paid at that time by the Government, and which very advantageously circulated a little money among the community.

The island appears now to have enjoyed an uninterrupted state of prosperity and tranquility during six years.

In 1806 Capt. Bligh in the Surveillante, attacked and took possession of the island, and partially fortified it, leaving one of his lieutenants as Governor. A number of officers of this rank rapidly succeeded each other in the command, probably on the visit of every senior officer, but it appears to have been thought of so little importance that ten months afterwards it was evacuated by the English Government.

Early in 1807 the inhabitants again petitioned the Spanish Government for the re-appointment of Colonel O'Neille which was readily complied with. Unhappily however soon after his arrival on the island, his health became so delicate that he was obliged to return to Carthagena, and his resignation of the command speedily followed.

For a short time the Government was afterwards entrusted to Capt. Garcia, who being recalled, the inhabitants selected Mr. Gonzales, one of the oldest and most respectable of their community for his substitute. Soon after Mr. Gonzales had assumed the command the war of Independence broke out, and the island became occasionally infested by the predatory incursions of the numerous small piratical privateers which then swarmed in these seas. This naturally roused the hitherto latent activity of the islanders, and in a very short time, they had fortified every point of the island which offered anchorage to a vessel of the smallest draft of water; indeed so effectually had they succeeded that imagining themselves perfectly secure from these troublesome visiters, a general relaxation of military discipline ensued, which subsequently led to the most fatal and melancholy events.

Among the numerous desperadoes who took advantage of the protection of this sanguinary war of Independence, to practice the most frightful and cold blooded system of piracy ever recorded, the notorious Mitchell may be perhaps considered as having surpassed all others in daring, intrepidity, and reckless audacity. Having been driven from his strong hold at the entrance of the Mississippi, he had selected these seas for his rendezvous.

It came to the knowledge of Mr. Gonzales that Mitchell had visited Old Providence, but without committing any depredation; and having heard of the outrageous acts attributed to him, the Governor fully impressed with the security of his isle, offered a handsome reward for the head of this noted renegade.

Some months afterwards in the year 1816 a national vessel arrived which brought information to the Governor that Mitchell was lying at Great Corn island, and having heard of this proclamation, had said that on a given day he would claim the reward in person. This intelligence as may be supposed was treated with perfect contempt by the islanders and their governor, indeed the friendly and prudent informant was threatened with imprisonment should he dare repeat the message.

The threatened day arrived, and strange to say, that so perfectly impregnable was the island considered by the Governor, that he retired to rest without even confining the few troops he had to their barracks. Mitchell however was true to his promise, and in his own vessel, accompanied by another, commanded by a person named "Rose," in the middle of the night, quietly effected a landing, took possession of the barracks and captured the governor in his bed.

Having secured all his property which was considerable, he was carried on board one of the Privateers and shot. On the following day rewards were offered for the apprehension of the dispersed soldiers, and unhappily their ready satellites, the discontented slaves, soon succeeded in capturing them. These notorious villains now landed with their captives, and set fire to the barracks, government house, and chapel, and with a refined idea of sacrilegious cruelty commanded the soldiers to kneel down on the brick platform of the still burning house of worship, and in this position were they barbarously shot at and mangled. This however did not satisfy the blood thirsty followers of Mitchell.

The unfortunate wretches who still lingered after the volley, were thrown by the merciless invaders into the flames, and the fire being insufficient to reach some of their bodies, they were dragged to a distance and left. For several days afterwards, the disgusting spectacle of hogs and dogs devouring the remains of the half burnt bodies, polluted the light of day.

Having embarked their plunder these "defenders of liberty" quitted the island without having, as may be supposed, much aroused the zeal of the people in favour of republicanism. After their departure the bones of the sufferers were collected by the inhabitants, and buried near the scene of their misery.

Visit of the King of the French.

The recent visit of his Majesty Louis Philippe, the King of the French, to her Majesty the Queen of these realms, has now become a subject of history; and as such, it falls within our duty as public journalists to record. But, besides considerations of duty, there are others connected with it, (we are not alluding to those of a political kind, as politics do not belong to us, however auspicious in that light also may such an event be considered,) there are other considerations, we say, connected with it, which at once invest it with something more than duty,—events, which besides the right welcome greeting which awaited the

Royal visiter at every turn in our island, convinced the Naval officers of his retinue, that they were no less welcome to our shores. We allude especially to those events, which were witnessed at Portsmouth on this occasion; and witnessed, we may say, by many thousand persons, who vied with each other in shewing both on shore, and afloat, the real sentiments of honest and cordial friendship which they felt towards their visiters.

The events at Portsmouth were essentially Nautical, and occurring as they did, at our great naval Arsenal; and connected, as they were, with French naval officers; we consider that we have an undoubted right (looking at the blue wrapper of our journal) to be as diffuse as we please on this gratifying occasion. And we intend to be so;—We do intend, that such a visit, as Portsmouth has received, shall not be lost on our part; that it shall be recorded with all the joyous feelings which were there; and we shall still dwell, with pleasure, on the remembrance of every warm sentiment,—on every spontaneous expression of friendship as they flowed from manly, noble, and generous hearts, and preserve them as they should be; and cherish and consign them to the page of history, as our duty is, with the motto *esto perpetua*. We shall therefore make no apology for devoting so large a space of our journal to this object; satisfied that our feelings on the subject are reciprocated by many a reader of the *Nautical*, who was, and who was not present on this extraordinary occasion. And we shall levy our demands on all sources of information, in order, with our own, to preserve in the pages of the *Nautical Magazine*, the most complete account yet published of the well celebrated visit of his Majesty Louis Philippe the King of the French and his suite to England.

The embarkation of his Majesty Louis Philippe took place at Treport on Monday evening. At about five o'clock detachments of military lined the quay there, with gendarmes, douanies, revenue police, and all who could muster, to give as much pomp to the embarkation as the town was capable of. As it was known the King could not arrive before nightfall, all the houses were illuminated, while the wives and daughters of the fishermen lined the way from the quay to the border strand, where lay the royal gig, each holding a flaming torch. The effect is stated to have been most striking from its cheerful and primitive simplicity. About six o'clock three carriages dashed down, amidst cries of "Vive le Roi," and from these descended the King, wrapped in a travelling cloak, his son, the Duke de Montpensier, M. Guizot, and other distinguished personages. The King led the way to the Admiral's gig, bowing with courtesy to his fair guard of torch-bearers. The gig dashed through a heavy swell over the bar, riding gallantly; soon afterwards the officers of the different ships went on board a tender steamer and followed the gig at a respectful distance. The *Gomer*, waiting for the King, was anchored at about two miles from shore. Immediately upon the approach of the canot, as it is called, a sudden illumination took place of the most striking effect; blue lights were shewn from the deck and from the yards, so that the vessel seemed enveloped in a sheet of flame. Rocket after rocket was then shot up, and replied to by the *Caiman* and the *Elau*. The fleet did not weigh anchor for a full hour afterwards, when the *Gomer*, which lay nearest the shore sailed past

and took the lead. During the King's embarkation, the marine band played merrily.

The *Gomer* did not immediately commence her voyage on receiving the French King, but at about eight o'clock at night the order was given to proceed, and the other steam-boats, with the exception of the *Pluton*, which was understood to have gone forward in order to announce to the authorities at Portsmouth the coming of the King of the French, having dropped astern, the *Gomer* moved on a-head. This vessel carries twenty-four guns, and has a steam power of 450 horses. With her saloon and cabins brilliantly lighted up, and with part of the masts illuminated, she looked a magnificent object as she passed smoothly over the surface of ocean in the midst of the stillness and darkness of night.

The weather was extremely favourable. The following is a list of the distinguished personages accompanying the King of the French and the Duke de Montpensier to England:—His Excellency Le Baron de Mackau, Minister of Marine and Colonies, attended by Le Capitaine Peillion, R.N., and Le Capitaine Page, R.N, Aides-de-Camp to his Excellency Le Baron Fain, Chief du Cabinet du Roi; Dr. Fouquier, Physician in attendance on his Majesty; and M. Pasquier, Surgeon in Ordinary to the King. Le General Baron Athalin, Le General Comte de Rumigny, Colonel Comte de Chabannes, and Colonel Comte Dumas, are the Aides-de-Camp in attendance on the King; and Col. Thierry, Aide-de-Camp to the Duke de Montpensier. All these personages were *en grande tenue*, and it is needless to observe what a splendid effect was produced by such a number and variety of rich uniforms.

About day break on Tuesday, the French squadron approached the English coast, and the inhabitants of Portsmouth were early on the look out for it.

It may well be supposed that they were in no ordinary state of excitement at the anticipated visit of the King of the French. As his Majesty was to pass up the harbour to the landing place at the Royal Clarence Victualling Yard, without at all passing through the town, there was, of course, no opportunity for those displays in the shape of triumphal arches and decorations which have marked the royal progresses of our own Sovereign. But the Municipal authorities made ample amends by their activity and desire to pay every possible respect to his Majesty in the way which the circumstances of the case allowed. Besides making arrangements for a series of grand entertainments to the noblemen and gentlemen who have accompanied his Majesty from France, they also prepared to pay a mark of personal respect to the French monarch, by presenting him with an address. The preliminary arrangements for the address had already been made; it is unnecessary therefore to say more here, than that it was most graciously received and responded to by King Louis Phillippe.

With the arrangement of these matters the active interference of the corporation and inhabitants ceased, and the rest of the preparations for the reception of his Majesty at the great naval port of England devolved upon the military and naval authorities, and the civil functionaries at the dock yard.

Soon after the firing of the morning gun on Tuesday, the inhabitants

were aroused from their slumbers by a salute fired from the platform battery in honour of the Lords of the Admiralty, who arrived the previous night—Sir George Cockburn, Rear Admiral Bowles, and Capt. Hamilton, the Secretary to Lord Haddington, at the dock yard; and the Hon. T. H. L. Corry, and the Hon. Sydney Herbert, at the George, Portsmouth. The Admiralty flag was hoisted at the dock yard at six o'clock, and the ships also hoisted it as they saluted it in the morning. The platform battery also saluted, and very shortly afterwards another salute was fired from the ships in honour of the French Ambassador, the Count St. Aulaire, who arrived on Monday night, at the Railway terminus, and the tri-colour was hoisted at Pettit's Railway Hotel, where his Excellency stopped.

The *Caiman*, French steamer, brought the news on Sunday that his Majesty Louis Philippe would embark at Treport on Monday evening. The King's little sailing yacht, *La Reine Amelie*, 8, Capt. D'Harcourt, had worked into Spithead on Monday evening, and in the night, about half-past eleven, the *Pluton*, steam sloop, arrived as a sort of advanced guard to announce his Majesty's approach. A Queen's messenger having arrived in the night with a letter from her Majesty to the King of the French, he took a passage out to his Majesty in the *Echo* steam tug, which vessel had been ordered the night before to take out the Assistant Master Attendant and pilots to bring the squadron into harbour. This letter was found to announce to the King that Prince Albert would arrive by train to meet him about 10 o'clock.

It was contrived that the squadron of experimental gun-brigs and one or two ships of the line, and some other vessels, should, by stretching out for some miles off the harbour in the direction of the French coast, at once act as heralds of the approach of the French vessels, and as a sort of escort to his Majesty up the harbour. Accordingly on Monday evening the gun-brigs *Daring*, 12, Captain Matson, *Mutine*, 12, Captain Crawford, *Waterwitch*, 10, Captain Birch, *Cruiser*, 16, Captain Fanshawe, *Flying Fish*, 12, Captain Harris, *Espeigle*, 12, Captain Thompson, *Osprey*, 12, Captain Patten, and the *Pantaloon* 10, Captain Wilson, stretched out in the way described, with instructions on the arrival of the French Squadron each to fire a salute and fall into the wake of the others, the whole afterwards following the French steamers. The *St. Vincent*, 120, Captain Rowley, bearing the flag of Admiral Sir Charles Rowley, Commander-in-Chief at the Dockyard, was at Spithead, and at a short distance from her was the *Queen*, 110, Captain Martin. There were also in the line of outlying ships several of the Royal Yacht Squadron, so that the whole formed a tolerably large fleet, extending far out in the horizon, and awaiting the moment when the appearance of the first French vessel should call them into activity.

About half-past five, just as daylight was dawning, by sweeping the horizon, the smoke of the steamers and their funnels were discovered bearing from the brig squadron S.E.b.E. The steam vessels became more distinctly visible, the light increased, and they came on with a full fair wind. The steam vessels of the French squadron shut off the steam as they neared the brigs, and came slowly up with the drift of the wind and tide. There were four French steamers—*Gomer*, of 24

guns, (most decidedly the finest steam ship of war ever seen) on board of which was the King and his suite, bearing the Royal Standard; *Elau*, of 10 guns; *Caiman*, of 10 guns; and *Pluton*, of 6 guns; and the little yacht brig *La Reine Amelie*, of 8 brass guns.

They came up with the first at seven o'clock, when as the Royal French yacht *Gomer* came abreast of each brig they hoisted the French flag at the main, fired a Royal salute, and each got under weigh, and followed the French squadron to Spithead. The steam vessels took a straight open course right into Portsmouth Harbour. The brigs arrived at Spithead at a quarter past nine, and there anchored.

The *Pluton*, French steamer, returned the English compliment, which occupied her some time.

Many of the Royal Yacht Club Squadron went to St. Helens, and came up with the King of the French.

The French Squadron as it approached was received by the five brigs at St. Helens, *Espiegle*, *Mutine*, *Flying Fish*, *Pantaloon*, and *Waterwitch*, in the order arranged. At six o'clock they could descry one of the French steam vessels making up towards them, which proved to be the *Caiman*, which was the *avant courier* of the royal squadron. As the steamer neared she saluted, the brig returned the compliment, and she passed on to Spithead, saluting the *St. Vincent*, *Queen*, and the brigs there, *Osprey*, *Daring*, and *Cruiser*. The van of the squadron soon after came up, when the brigs slipped their kedges, hoisted the French flag at the main, fired royal salutes as the *Gomer*, royal yacht, Admiral La Susse, Captain Goubin; the *Pluton*, steam frigate, Lieutenant Marrieau; the *Caiman*, steam frigate, Lieutenant Valmont; with the sailing yachts *Reine Amelie*, and *Favorite*, passed, and came up after an escort.

In the meanwhile the barges of the *St. Vincent* and *Queen* were lying at the Victoria Pier, and as early as seven o'clock the barges of the admirals, captains, and commanders of ships in commission, assembled at the King's stairs in the Dockyard.

We should here remark that the brigs at St. Helens, the ships at Spithead, and all the vessels of her Majesty in commission in the harbour, were dressed out for the occasion in various coloured flags and ensigns of all nations.

At nine o'clock the leading steam vessel of the Royal French squadron was seen distinctly from Portsmouth, standing in towards the harbour, the others closely following. As they approached Spithead the *St. Vincent*, *Queen*, *Daring*, *Osprey*, and *Cruiser*, manned yards. hoisted the tri-colour, and thundered forth a royal welcome.—The guns at the King's bastion followed, and a portion of the Royal Yacht Squadron also dressed on the occasion, manned yards, hoisted the French flag, and fired salutes. At this moment the man-of-war barges were seen leaving the King's stairs. in the following order.—

The barge of Admiral Sir Charles Rowley, the commander-in-chief, in which were Sir George Cockburn, Rear Admiral Bowles, Captain W. A. B. Hamilton, the secretary to the First Lord, Captain Rowley, the flag captain, Mr. Secretary Haig of the Port Admiral, Lieutenant Smith (c), of the *Victory*, steering the barge. The barge had her pendant flying and the Port Admiral's ensign. The Officers were in full

uniform, with white trowsers, and the crews, as in the other barges which followed, were dressed in black hats, white shirts, and blue trowsers, remarkably fine and neat.

To the Admiral's barge followed that of Rear Admiral Superintendent of the Dockyard Parker, C B.

The barge of the *Victoria and Albert*, Captain Lord Adolphus Fitzclarence.

The barge of the *Victory*, 104, Captain Mowbray.

The barge of the *Firebrand*, steam frigate, Captain A. L. Corry.

The barge of the *Excellent*, and afterwards those of *Daring*, *Mutine*, *Cruiser*, *Clio*, and all the vessels in commission, forming a line, rowing close to each other, as they proceeded from the Dockyard. They rounded off Gosport and lay to to receive the Royal French squadron which came on at half-speed, and took up moorings the first off the Queen's Wharf Victualling Yard, the royal yacht *Gomer* (bearing on her foremast the union jack, on her main-mast the tricolour flag, on the white field of which was embroidered the initials "L. P. I." surrounded by a crown, and on her mizen a plain tricolour) a short distance astern; and the other steam frigate as far again towards the mouth of the harbour.

On the Royal French squadron anchoring, the *Victory* and *Excellent* opened another royal salute with yards manned, and the concourse of people afloat and ashore giving a loud unanimous cheer. Each of the yacht squadron hoisted the French colours, and also fired a salute.

Sir George Cockburn and the Lords of the Admiralty immediately proceeded to pay their respects to the French King. His Majesty most graciously received their lordships, conversed with them and with Lord Adolphus Fitzclarence, saying that he had experienced no inconvenience on the voyage, and the vessel produced little motion. His Majesty announced his intention of not coming on deck until the arrival of His Royal Highness Prince Albert.

The Admiralty then quitted the yacht.

Application having been made some days ago by the Mayor and Corporation of Portsmouth, through the Home Office to the French Ambassador, to know whether his Majesty would be pleased to receive an address from them on the occasion of his visit, the French Ambassador transmitted the application to his Majesty, and on Monday informed the Corporation by letter that his Majesty had directed him to say that, however short the time might be between his arrival at Portsmouth and leaving it for Windsor, nothing could give him greater pleasure than to receive the address of the municipal body. Accordingly the mayor and corporation assembled in their robes at the Guildhall, and at eight o'clock proceeded in procession, their various officers bearing before them the ensignia of office, to the Victoria pier. Admiralty barges with boatmen from the Dockyard were in waiting off the pier, in which the corporation embarked to proceed to the *Gomer*, which stopped opposite to the pier in order to allow them to go on board. The following gentlemen were among those who were to present the address:—The Mayor, Edward Casher, esq.; Aldermen, Garret, Ellyett, Robbins, Bilton, Scale, Paul, Carter, Howard, Jones, Caught, Jackson,

Cooper, Thompson. Councillors, Warn, Bramble, Childs, Gibbon, Burne, Hoskins, Emanuel, Galt, Hendy, Crasweller, Garrington, Ellis, Smithers, White, Keet, Stigent, Burt, Prescott, Charles, Orange, Parnell, Nance, Reeve, Pearson, Sheppard, Galsworthy, Cox, Hatch, Law, Gauntlett, Herner, Dyson, Ross, Stephens, Whiting, Hogg, Owen, Purchase, Leggart. Mr. Rawlinson, the Recorder, also accompanied the corporation in his wig and gown, and Mr. John Howard, the Town-clerk, who had been sent at an earlier hour to meet the King and present him with a copy of the address before its public delivery, according to custom, was also there. Previously to that at six o'clock in the morning, Mr. Louis Vandenberg, jun., the Consul at Portsmouth, went off in a steamer, accompanied by M. Le Counte D'Harcourt, commander of the King's sailing yacht *La Reine Amelie*, to announce to his Majesty the fact that the address of the corporation would be presented to him on board the *Gomer*, and not after he landed, as the jurisdiction of the corporation expires at the Royal Clarence Yard. His Majesty in compliance with this suggestion, stopped, as we said, before the Victoria pier.

The corporation were shown into the saloon of the *Gomer*, a beautiful chamber, decorated with yellow damask, where they were most graciously received by the King. M. Guizot was there, as was also the Duke de Montpensier, Admiral La Susse, Admiral de Mackau, and the chief members of the King's suite.

The Recorder, Mr. Rawlinson, then read the following address:—

"To his Majesty Louis Philippe King of the French."

"We, the Mayor, Aldermen, and Burgesses, of the borough of Portsmouth, the loyal and affectionate subjects of our Most Gracious Sovereign Queen Victoria, desirous of expressing the sentiments by which we are actuated on the auspicious occasion of your Majesty's visit to England, and availing ourselves of the opportunity afforded to us by your Majesty's arrival within the limits of the port and borough of Portsmouth, beg leave to offer to your Majesty, with unfeigned sincerity and earnestness, the respect and congratulation of this ancient municipality.

"Regarding your Majesty's arrival as an honour conferred on our locality, we hail it the more, especially, as a highly important national event, from its tendeney to promote those kindly feelings of mutual respect which should ever subsist between two such powerful and influential countries as France and Great Britain.

"Solicitous to welcome the illustrious guest of our beloved Queen with every demonstration becoming so great and memorable an occasion, permit us to assure your Majesty of the lively interest we take in your Majesty's health and welfare, and in the joyful celebration of your Royal visit.

"We rejoice in the new era it is calculated to form in the history of the two countries, and in the hope it affords of a more enlarged and general intercourse between them, which, under the blessing of Divine Providence, shall contribute to their mutual welfare, to the preservation of the peace of Europe, and to the advantage of every part of the habitable globe."

His Majesty received the address most graciously, and immediately delivered in English the following reply:—

"Mr. Mayor, Messrs. Aldermen and Burgesses, and Gentlemen, who now surround me,—It is with peculiar satisfaction that I acknowledge the gracious permission of her Majesty Queen Victoria, to admit you to present to me this address. I have heard it read with unfeigned satisfaction, for having in former years long enjoyed the shelter and hospitality of your generous shores, it affords me the highest gratification to be able to express the warm feelings of my heart on the present occasion. Last year her Majesty kindly paid me a visit, which I felt as a great favour, and which I know has much tended to maintain and strengthen the friendship subsisting between the two countries, and which most warmly subsists between the hearts

of the two Sovereigns. My wish has always been to promote sincere union between my country and yours. When I formerly shared your hospitality, I long lamented the war which then unhappily raged between the two nations. I blessed its termination, and it was ever my desire and intention to cultivate good relations between the two countries. I felt, of course, that my first interest was towards my own country; but I felt that it was much more my interest that my country should be at peace with your country, and that your country should be at peace with my country. I felt also that this was necessary no less for our mutual prosperity than for that of mankind and all the world; inasmuch as no country can increase in prosperity but by the increase of the prosperity of its neighbours. I felt, and still feel, it our mutual interest that there should be no feelings of national jealousy subsisting between nations, and that, if such feelings cannot be entirely destroyed, we should at least always work to put an end to them. Such has always been my aim; and I account it my very good fortune to be again visiting your shores, and enabled to express to her Majesty my sincere affection, my warm friendship, and my gratitude for the many tokens of friendship she has bestowed upon me. I am happy, also, on this occasion, to be able to express how much I am gratified by this address. I assure you the recollection of the reception I have met with in England will never be effaced from my heart. Long may we all, gentlemen, enjoy the blessings of peace. Such is my aim and my wish. Depend upon it I shall be warmly assisted in France in its maintenance and cultivation; and be assured at least that no effort on my part shall be wanting for it."

His Majesty spoke with great impressiveness, particularly in that part of his brief address in which he inculcated the necessity and desirableness of peace. At its conclusion the Recorder having expressed a hope that his Majesty had a copy of it, his Majesty replied, "Gentlemen I can give you no copy of this address, for I have improvised it, and I assure you it comes from my heart. I hope, however, there is some one here who will be able to record it." His Majesty being informed that a reporter for a morning paper who was present, had taken a note of it, the reporter was subsequently honoured by his Majesty's commands to supply him with a copy of his speech before he left the vessel. Among the little incidents which occurred, were one or two which marked the affability of the King, and his desire to put the members of the corporation entirely at their ease. The Recorder is a very tall man, and his head now and then touched the beams under roof of the deck. The King laughed, and as if apologising for the want of height between decks said, "We did not allow for your wig." His Majesty then took down the lamp hanging in the centre of the cabin, to prevent the Recorder's head coming in contact with it. Alderman Ellyett, one of those present, asked to have the honour of shaking hands with the King, on which his Majesty said, "I should like to shake hands with you all. I should like to know your names. His Majesty then asked the names of the Mayor and the Recorder, with both of whom he conversed a short time. He shook hands with every member of the corporation; and to some of them who were long in getting off their white gloves, he said, "Oh, never mind your gloves, gentlemen." Altogether their reception by the King seems to have been most gratifying to the corporation. In the course of conversation with the members of the corporation, his Majesty alluded feelingly to his former visit to Portsmouth many years ago. He remarked that this was not the first time he had been in Portsmouth. His Majesty said, "I remember your port very well." "I know all the points of the coast." "I remember your town, too; and Southsea and Portsea." "When I was last at Portsmouth, I

stayed at the Fountain Inn," and added that he also remembered the Dockyard well, though it was then called the Naval College. When his Majesty was last here, it appears, he embarked here on board the *Mercury* frigate, Captain Rogers, to proceed to the Mediterranean. The conversation being over, the corporation took their leave of his Majesty and retired. They re-entered their boats and followed in the wake of the *Gomer* up the harbour.

Meanwhile, at the Royal Clarence Victualling Yard, the preparations for the landing of his Majesty and suite were completed. The troops appointed to duty at that establishment took up their positions soon after eight o'clock. The guard of honour was stationed at the commencement of the long pier called the Queen's Wharf, in double row on the right side, going afloat. It was composed of the Grenadier companies of the 47th, 59th, and 76th Regiments, under the command of Major Ovendon; the other officers were Capt. Vernon, and Lieutenants Fordyce and Villiers, of the 47th, Capt. Boughty, Lieut. Lloyd, and Ensign Hore, of the 59th. The 59th staff coloured band were placed at the end of the guard of honour. The other troops in the Victualling Yard were 440 rank and file of the 47th, which formed up to the gate, the band of which regiment was placed at the flag-staff. Colonel Dundas commanded this body, and Majors Warburton and Gordon, of the 59th regiment, continued the line from the Victualling office gate towards the railway station, under Colonel Trevor and Major Gordon, of the 76th regiment, thence commanded by Colonel Clark, and Major Grubb, and the battalion of Royal Marines, above 300 strong, completed the line to the railway station. The bands of the respective corps headed them, and the colours of the regiment, were displayed.

Major General Sir Hercules Pakenham, the Commander-in-Chief at Portsmouth, commanded the troops in person, and Colonel Cardew, of the Royal Engineers, was second in command. Colonel Daly was also present.

Captain Carter, R.N. the superintendant of the Royal Clarence Yard arrived in time to superintend the arrangements; the other officers of the yard present were T. T. Grant, Esq. the storekeeper; and Mr. Town, the master attendant.

It was first intended that the public should, to a limited extent, be admitted to the yard; but a positive order, emanating, it is said, from her Majesty, kept the yard exclusively to the parties engaged in the reception and the public press. Lady Mary Bruce and the Earl of Elgin were however present, and Sir George Wombell was also at the establishment.

His Excellency the Count St. Aulaire was at the Victualling Yard with some of his suite, at an early hour, and when the *Gomer* arrived with his Majesty, his Excellency went off in Capt. Carter's boat to the Royal yacht.

The Hon. Thomas Henry Lowry Corry, one of the Lords of the Admiralty, and the Hon. Sydney Herbert, the secretary to the Admiralty, were at the Victualling Yard very early on this interesting occasion, and about half-past nine o'clock the royal naval barges came alongside, with the Lords of the Admiralty, and the respective captains and commanders of the ships in commission. Their lordships left the

Royal French Yacht, his Majesty being engaged in receiving the address of the Mayor and Corporation.

There were assembled on the pier, waiting the arrival of his Royal Highness Prince Albert and the Duke of Wellington, the following officers:—Admiral Sir George Cockburn, Bart., G.C.B., with the red sash of his order; Rear Admiral Bowles, C.B., the Hon. T. H. L. Corry, the Hon. Sidney Herbert, Captain W. A. B. Hamilton, the private secretary to the First Lord of the Admiralty; Rear Admiral Superintendent of Portsmouth Dockyard, Hyde Parker, C.B.; Major General Sir H. Pakenham, Captain Lord Adolphus Fitzclarence, G.C.B, with the blue sash of his lordship's order; Captain Superintendent Carter, Captain Rowley, of *St. Vincent;* Captain Moubray, of the *Victory;* Captain Martin, of the *Queen;* Captain A. L. Corry, of the *Firebrand;* Commander Matson, of the *Daring;* Commander Fitzjames, of the *Clio;* Commander Crawford, of the *Mutine;* Commander Fanshawe, of the *Cruiser;* Commander Estcourt, of the *Eclair* steam sloop; Lieutenant Smith, flag lieutenant to the Lords of the Admiralty; Lieutenant Provost, flag lieutenant to Sir C. Rowley; Lieutenant Cracraft, flag lieutenant to Rear Admiral Parker; Major Fenwick, R.E.; Colonel Cardew, R.E., T. T. Grant, Esq., &c.

The Earl of Yarborough, Commodore of the Royal Yacht Squadron, and the Earl of Wilton, joined this distinguished company; and we may here mention that the yachts of the R. Y. S. gave a hearty welcome to his Majesty—first Kestral saluted; then the Gem, which met *Gomer* some distance to the eastward; Lord Wilton's Xarifa saluted at Spithead; Lord Orkney's Jack o'Lantern off Southsea, where also lay Flirt (Sir B. Graham's), and Georgian (E. Lyon, Esq.), looking beautiful, and cheering as the King passed.

His Majesty had descended to the saloon to receive the corporation, having previously been on deck, where he repeatedly acknowledged the cheers of the people on the shore, and in the different craft. After the corporation had retired, the *Gomer* proceeded up the harbour, passed the Round Tower, the Sallyport, and the floating bridge, which attracted his Majesty's attention. All these places were crowded with people, who cheered vociferously as the King passed.

Here his Majesty awaited the arrival of Prince Albert, but nearly an hour elapsed after the King's steamer took up her moorings before the Prince arrived. The officers of the port, Admiral Hyde Parker, Sir Charles Rowley, and others, went off in their boats to the *Gomer,* to pay their respects to the King. Soon after their return a distant salute, and the national anthem played by the band, announced that Prince Albert was coming. At twenty-five minutes past ten his Royal Highness, who had left Farnborough in a special train at thirty-seven minutes past eight o'clock, and arrived at the terminus at twenty minutes past ten o'clock, entered the yard, accompanied by the Duke of Wellington, and walked briskly down the stairs whence he was to embark. A barge with Prince Albert's flag, the Royal arms quartered with the Prince's was waiting alongside, into which the Prince stepped, loudly cheered by the spectators, who thronged in the boats that covered the harbour. Immediately behind the Prince was the Duke of Wellington, and, as he descended the steps, a cry was raised of "A cheer for the

Duke," to which a deafening response was given. The Duke wore his Field Marshal's uniform; but the Prince was dressed in plain clothes (black), with a white hat and crape band. The Duke having followed the Prince into the boat, they went off rapidly to the *Gomer*, amidst the cheers of the multitudes that surrounded them on all sides.

The King of the French, who was on deck awaiting the arrival of the Prince, as soon as he saw the Prince hastened with eagerness to greet him, and not only shook him heartily by the hand in a manner which denoted a most friendly feeling, but saluted him on both cheeks, after the French fashion. The Prince returned the King's welcome with equal warmth, though his demonstrations of amity were confined exclusively to the English style.

The greetings of the King and the Prince had scarcely concluded when the Duke of Wellington, who, as we have before said, left Clarence Victualling-yard in the same boat with Prince Albert, came on board the *Gomer*. His Majesty, Louis-Philippe instantly recognized him, and seizing both his hands, shook them cordially, addressing the Duke at the same time in terms which were evidently of the most friendly import, as his Grace replied to them by repeated bows. The French King, Prince Albert, and the Duke of Wellington remained uncovered during their mutual salutations. We should not omit to mention that on Prince Albert making his appearance on board the *Gomer*, the vessel was instantaneously dressed out with the gayest flags, the yards were manned, and the French artillery band struck up the English national air, "God save the Queen," which was followed by "La Parisienne."

The royal and distinguished party then moved towards the gangway in order to descend to the boat which was to convey them on shore; and the return of the royal party towards the Clarence-yard was the signal for renewed cheering, shouting and salutes. From the time the barge left the sides of the *Gomer* till she came alongside the stairs, the same excitement continued. The King of the French repeatedly acknowledged the cheers of the spectators, taking off his hat and bowing. He wore the uniform of a Lieutenant-General, blue, with red facings, and he also wore a blue riband. His Majesty looked remarkably well and animated. He had evidently suffered nothing from his voyage. The landing place was carpeted with scarlet cloth, and the rails on both sides covered with flags. Arrived at the stairs, the Prince preceded the King by his desire, and the King and Prince Albert entered the carriage, which immediately afterwards drove off, the band playing the National Anthem. The other carriages followed, and in a few minutes after they reached the railway station, which had been decorated with flags and evergreens. Here a limited number of persons were admitted to witness the departure. Colonel Henderson and Mr. Chaplin, directors, were present to receive the King.

The train started from Gosport with the King, Prince Albert, and the distinguished personages who accompanied them, at 11 o'clock, and arrived at Farnborough station at half-past 12 o'clock, where carriages were in waiting, in which they immediately went off at a rapid pace toward Windsor. The special train was driven by Joseph Locke, Esq., chief engineer of the South-Western Railway, and in performing this

duty, he exhibited for the first time, a decoration presented to him by the King of the French during his service in France.

The carriage of the South-western Railway, in which his Majesty rode, is of a most splendid description; it has been constructed for the use of her Majesty on the South-western Railway, from the design of Mr. Beattie. The interior is divided into two compartments, one of which is devoted to her Majesty and Prince Albert, and the other to the royal nursery. The furniture and trimmings are very costly and elegant. The larger compartment, devoted to her Majesty and her royal consort, contains two couches placed longitudinally, one intended for the Queen, and the other for Prince Albert. The carriage is lined with a light drab silk damask, richly trimmed with crimson and white silk lace; the ceiling is formed of white watered silk, exquisitely embroidered with crimson velvet and silver in relief, forming the national emblems of the rose, shamrock, and thistle, with the royal crown at each corner. The carriage is entirely surrounded by light and tasteful draperies of crimson and white satin damask, which are also lined with crimson satin, and richly trimmed fringe, &c., of the most elegant description. The blinds are of a delicate peach coloured silk, with silver tassels, and supported by white and gold brackets at the sides. The carpet is of Axminster manufacture, in colours to harmonize with the whole. The floor is protected by coatings of India-rubber and cork-wood; and a double flooring has likewise been prepared; due care being taken to prevent vibration. The exterior of the carriage, which is seventeen feet long, by seven feet wide, consists of three bodies;—viz. two *coupés* neatly and luxuriantly lined, and the centre body shielded by her Majesty's arms, executed in a most tasteful style. The panels are of a light lake colour, as desired by her Majesty, and an observable novelty in its construction consists of wooden wheels, (Beattie's patent,) in the place of iron; much inconvenience in travelling will be obviated, as it is anticipated, by this application of wood. The whole is surmounted by a splendid crown. It was used for the first time for the conveyance of the King of the French.

At the various stations along the line appropriate displays were made; especially at Brook Farm, Hartford Bridge, the residence and property of W. A. Burgess, esq., brother of the late Bishop of Salisbury. Through a rising spot of ground on the estate, the line of railway passes, and in compliment to Prince Albert, on his way to Gosport, that gentleman erected flag staffs 60 feet high, on the mounts, one on each side, from which floated in full majesty—the Union Jack and White Ensign, and upon his return with the King of the French—a Tricolour, in compliment to his Majesty. These flags were 14 feet long, and were seen for miles round, producing a very picturesque effect.

At ten minutes past two o'clock, the guns in Windsor Park announced the King and the Prince Consort to have nearly finished their journey. Her Majesty was so anxious not to suffer the opportune moment for receiving her august visiter to escape, that she descended into the grand vestibule fronting George the fourth's gate, at which the *cortége* was to enter, some minutes before the carriages drove up. During the short interval that elapsed, Queen Victoria, accompanied by the Duchess of Kent, and attended by the Countess of Gainsborough,

the Lady in waiting, and by Sir Robert Peel, the Earl of Liverpool, Earl Delawarr. the Hon. George Anson, and some other of the principal officers of the household, awaited the King's arrival. Her Majesty was in high spirits, and conversed affably with her attendants, her countenance beaming with satisfaction and excitement at the interesting meeting which awaited her. At ten minutes past two o'clock, the first carriage, containing the King, Prince Albert, the Duke de Montpensier, and M. Guizot, drove under the portico. At this moment Her Majesty advanced to the threshold, and in the most cordial manner extended her arms, whilst Louis Philippe and the Prince descended from the carriage. Their Majesties embraced most affectionately at the moment of meeting; and the three principal personages advanced at once into the vestibule, the French Monarch bestowing his cordial smiles and greetings on Sir R. Peel, the Earl of Liverpool, the Hon. George Anson, and others of the Royal household with whom he was familiarly acquainted. The Duke de Montpensier and Admiral de Mackau escorted the Duchess of Kent; and the Royal party, followed by the Ministers and suites of both the Monarchs, proceeded at once up the grand staircase, where, turning to the left, the Queen conducted her guest to the apartments appropriated to his use. Having installed the King in his apartments, her Majesty and Prince Consort withdrew until the hour of luncheon, which was retarded until three o'clock. At eight o'clock the royal visiters were again summoned in order to proceed to dinner, which was served in her Majesty's private dining-room, covers being laid for the principal persons only of their Majesties suites. The banquet was served in the gold plate used upon occasions of more than ordinary state. Her Majesty occupied the centre of the table, the King being seated on her left.

The Prince of Wales's Epergne, crowned with his Royal Highness's plume, was placed at this part of the table, between two other epergnes of great beauty, sculptured in gold at the base with "Dancing Fauns." These epergnes had on either side the "Hesperides Candelabra."—M. Guizot, the Earl of Aberdeen, his Excellency Count de St. Aulaire, the Countess of Gainsborough, and the Duke of Wellington, had seats in the vicinity of the Royal circle. Her Royal Highness the Duchess of Kent sat by the side of the King of the French. The following had the honour of dining with the Queen:—

The Count and Countess de St. Aulaire, Prince Castelcicala, the Lord Chancellor and Lady Lyndhurst, the Duke of Buccleuch, the Duke of Wellington, Marquis of Exeter, Lady Charlotte Dundas, Earl of Liverpool, Count and Countess Delawarr and Lady Mary West, Earl of Jersey, Earl of Aberdeen, Earl Jermyn, Lord and Lady Wharncliffe, Viscount and Viscountess Canning, Sir Robert and Lady Peel, Sir James and Lady Graham, Sir George Murray. Sir W. Freemantle and Miss Hervey, Sir Henry Wheatley, Sir George Couper, Lady Isabella Wemyss, Sir Charles Rowley, the Provost of Eton and the Hon. Mrs. Hodgson, the Hon. and Rev. R. Stopford, Mr. George E. Anson, the Hon. Miss Lyttelton, M. Guizot, Admiral de Mackau, Count de Jarnac, General Athalin, General Rumigni, Colonel Damas, Count de Chabannes, M. Thierry, Barron de Fain, M. Fauquier, M. Pasquier, M. Herbert, M. Hennequin, Le Capitaine Page, Le Capitaine Pellion, Viscount Sydney, Lord Charles Wellesley, and the Hon. Captain Duncombe.

The Earl of Liverpool officiated at the north end of the table, the window of the dining-room looking down upon the terrace garden.—The gorgeous wine-cooler constructed for George IV. stood on a pedestal in front of their Majesties. Whilst the repast was proceeding, the private band of her Majesty performed in an apartment immediately connected with, but not visible from, the dining-room, several compositions of the most distinguished masters.

We must now turn to the events at Portsmouth. On Wednesday, the day after the arrival of his Majesty, Admiral de la Susse and the officers of the French Squadron, were entertained by Sir Hercules Pakenham; on the following day by Admiral Sir Charles Rowley, and on Friday by Rear Admiral Parker, and in the evening adjourned to the BALL at the Royal Naval College, which was unquestionably the grandest ever known in Portsmouth; indeed, on no occasion has Portsmouth held so much rank, beauty and distinction, as assembled at the College on that evening. The quadrangle of the college was enclosed for the occasion with a canopy of canvas, the interior roofing being formed of the ensigns of all nations, arranged to diversify the colours, without reference to their respective countries. The sides of the ball-room were hung with standards and ensigns of England of the largest size, and various devices in pistols, bayonets, swords, &c., arranged around the room.

The supper-room was formed of the covered way. The committee-room was set apart as the ladies' room. The officers mess-room was the refreshment-room. The library formed the card-room, and the fencing-room was used as the cloak-room. The arrangements reflected the very highest credit upon the committee of management. Invitations were sent to all the nobility and gentry for miles round, and were in almost every case accepted. A magnificent transparency was placed at the head of the room, representing the portraits of our beloved Queen and his Majesty King Louis Philippe. Upwards of 1200 of the *elite* of the county and surrounding neighbourhood were present. It would be impossible to pay too high a tribute of praise to the most indefatigable labors, excellent taste, and perseverance which have marked the conduct of the committee of management throughout their gigantic task. Four days since, and there was the naked quadrangle of the college, cold, deserted, and grass-grown. Now, as if by magic, there was a splendid ball-room, nearly 100 feet long by 45 broad, lined with the richest colored flags, embellished in the neatest, yet elegant style, and having a beautiful floor, where the graceful evolutions on the "light fantastic toe" were indulged in to the heart's content. At the end of this room on either side, and under a canopy composed of flags, festooned with many colored bunting, what on Saturday last was more like an uninhabited room than anything else, was now turned into an elegantly furnished and most comfortable supper-room. But we will proceed formally to describe the wonderful metamorphosis. On entering the dock-yard to the right of the guardhouse, a sudden blaze of lamps burst upon the sight, caused by a most brilliant illumination, consisting of a large crown surmounting the letters "L. P."; underneath which, and surmounting the portico which had been erected outside the building was the word "Welcome," also in splendidly variegated lamps. Passing

through this, and ascending the steps leading into the hall, were a number of gentlemen to receive the distinguished visiters. This hall was covered with crimson cloth, the walls were hung with flags of all nations, whilst the panels were ornamented with lances, arranged in triangles; the pillars were beautifully covered with evergreens and handsome flowers; the staircase was also fitted up in a similar manner, to be in unison with the rest. On the left of the hall was the officers' mess-room. This, as we have stated, was converted into a refreshment room, where the choicest viands were served during the evening, ices, jellies, wines, tea, coffee, orange and lemonade, &c. This room was beautifully decorated with flags, and festooned with flowers suspended round the walls, and arranged in wreaths on the panels, whilst at the head of the room was a splendid transparency, formed on canvas, exhibiting the letters "L. V. P." arranged in dahlias of every hue and shade, and supported on one side by the French flag, and on the other by the British standard. The library was adapted as a card-room.

Returning to the hall to enter the ball-room the visiter passed through a well-arranged entrance passage leading down three steps into the quadrangle of the building. This passage was most tastefully decorated with evergreens and flowers, and over the entrance was a device formed of bayonets; in this passage eight boys belonging to the *Excellent*, in their men-of-war rig, were placed with baskets of beautiful flowers in bouquets, which they offered for the acceptance of the ladies as they passed. The healthy appearance of the boys, and their clean dress, formed a most pleasing item in the great whole. Passing through this passage the ball-room burst upon the sight in eastern magnificence; here most prominently conspicuous at the head of the room was a beautiful transparency of the busts of Queen Victoria, and Louis Philippe surmounted by the crown, with a wreath of myrtle underneath; this had a most striking effect, and was the design of Peter Cracroft, Esq. Flag-Lieutenant to Rear Admiral Hyde Parker. Under this transparency were placed the splendid band of the Royal Marines, whilst on the right were stationed Weippert's full quadrille band, and on the left the band of the 59th Regiment, all in capacious orchestras raised about twelve feet from the floor, the fronts very handsomely festooned with evergreens, and a row of wax tapers running along the whole front of the orchestra. This room was formed of the quadrangle of the college, boarded in, and canvas-roofed, with a canopy formed of the flags and ensigns of every nation arranged so as to diversify as much as possible the colours without respect to their countries. From the centre along the roof of the room were suspended three splendid chandeliers with argand lamps, which yielded a grateful light to the objects in the room without being too powerful to oppress the vision. At each corner of the room were the English ensigns, and around were arranged in various devices, pistols, swords, bayonets, &c. intermingled with evergreens, and large wreaths of beautiful flowers encircled a lamp at regular distances all around, whilst over the entrance a sun, formed of sword blades, reflected its thousand gleams upon the dazzling throng. The ball-room at twelve o'clock presented a blaze of dazzling splendour such only as we read of in the Arabian Night's Entertainments. Carriages began to set down at ten and continued until one. Weippert's

Chatsworth quadrilles and La Polka seemed to be the prevailing dances throughout the evening.

The supper room we have already stated was formed of the "covered way" at the extremity of the quadrangle. This room was approached by two passages leading from the extremity of the ball-room, and which were most gaily decorated with flowers, flags and evergreens. Over the passage to the right being the Royal Standard of England and over the left the French flag. The supper was laid out on four tables, making the circuit of the room, on which were displayed in rich profusion silver and gold candelabrum, and splendid pedestals of gold mounted with choice fruit, and the British and French flags in miniature, most beautifully worked and embroidered on satin, about seven inches square. At the centre table were two miniature French flags, that being the place selected for the French-Admiral la Susse.

The supper consisted of turkeys, pastries, pines, bouquets, hams, tongues, Italian salads, jellies, lobster, chicken and anchovies, savoy biscuits garnished, soups, socks, pheasants, grouse, partridges, and in short everything in season,--pines of the most *recherche* character, and fruit of the very choicest growth. Description of such a magnificent display is useless; some faint idea however may be gathered of the princely nature of the banquet, when we assert that, the necessaries supplied amounted to *fifteen tons!* The whole of the wines, which were of the most superb description, were supplied by Messrs. Casher of High-street Portsmouth. Supper was announced at a quarter to one, when the French Admiral was ushered in by Rear-Admiral Hyde Parker, and the room was soon filled, the space in the centre being occupied by the anxious expectants. Our gallant and deeply-respected Commander-in-chief, Admiral Sir Charles Rowley, Bart., was present in the early part of the evening, but retired before supper was announced, the delicate state of his health precluding his keeping late hours.

Since the foregoing was in type we have received the following more particular account of the ball room:—

The ball room which was erected in the quadrangle or court formed in the rear of the College by the two wings of the buildings, was 99 feet in length, 41½ wide, and 34 feet from the floor to the angle of the roof, which was formed of the ensigns of various nations belonging to the dockyard. We are unable to supply a plan, but we may enumerate the ensigns in the order in which they were placed. Commencing at the entrance from the College hall was the Portuguese, English red, Buenos Ayres, American, Danish, Prussian, Brazilian, Austrian, Monte Video, Spanish, Russian. These were gracefully fluted, and from the extremes in two semi-circles, the Portuguese, Belgian, Admiralty, English white, French, English white, Admiralty, Dutch, Portuguese, descended to the sides at the further end of the room; and over the entrance the English white, Brazilian, Spanish, English white, Ionian, English white, Spanish, Brazilian, English white completed the remainder.

The sides of the room were formed,—that on the right by the St. George's ensign (one third) two union jacks beneath the orchestra, (next third) and the standard (next third); that on the left, the English red ensign (one third) two union jacks under an orchestra as opposite,

(next third) and St. George's ensign (next third.) The orchestra at the farther end of the room was finished with the French ensign on the left, and the Royal Standard on the right as seen from the entrance, which being each on a flagstaff gave a graceful and elegant, as well as most appropriate finish to the whole. Indeed the whole of the internal arrangements of the ball room called forth general admiration, and reflect great credit on the good taste of the navy in such matters. Among the brilliant assemblage were recognized :—

Admiral de la Susse and the officers of the French Squadron; the Russian Rear Admiral Count Putyatin; Mrs. Abbott, Lieut. Col. Adams and the officers of the 9th regt., Mrs Adams, Mrs. and Miss Amphlett, Col. and Miss Arnett, Mrs. Col. Arnold, Sir F. and Miss Austen, W. Balfour, Esq., Miss Baker, Capt. Ball, Capt. and Miss Banks, Mr. Barkworth, Lieut. Barlow, Col. Barnard, Miss Barnes, Miss Barton, Col. and Mrs. Badsden, Lieut. Batson, Miss Beauclerc, Mrs. and Miss Becher, Miss Beck, Capt. Mrs. and Miss Bell, Miss Bent, Capt. Bingham, Miss Blake, Mrs. Blathwayte, Col. Bowers, Mrs. Bowford, Col. Brandreth, Capt. Brandreth, Mrs. Browell, Capt. and Mrs. Brown, Mrs. Butt, Hon. Capt. Mrs. and Miss Byng, Capt. and Mrs. Calamy, Mrs. Caldwell, Mrs. Cameron, Col. Campbell, Rev. Mr. Campbell, Col. Carden and officers of Engineers, Capt. Carlton, Adml. Carter, E. Casher, Esq., (Mayor) and family, Capt. and Mrs. Cassan, Mrs. Cato, Lieut. Col. and Mrs. Chads and family, Major Chace, Lady and Miss Chamberlain, Mrs. Cheen, Mr. Chegwynd, Col. Chester, Lady H. Chichester, Mrs. Chimmo and family, Major and Mrs. Clare, The Misses Clarke, Mrs. and Miss Clements, Mrs. Clendon, Sir A., Mrs. and Miss Clifford, Mrs. Cleveland, Capt. Clifford, Miss Codd, Miss Cole, Col. Conolly, Miss Cote, Hon. H. T. L. L. Corry, Lord Commissioner of the Admiralty, Capt. and Mrs. Cosby, Lady Curtis, Adml. Dacres and family, Lieut., Mrs. and Miss Dacres, Col. Daly, Capt., Lieut., and Miss Davis, Mr. and Mrs. Day, Mrs. and Miss Deacon, Miss Dewes, Com. Dickson and family, Capt. and Mrs. Douglas and family, Com. and Mrs. Douglas, Mr. Darien, Miss Duff, Lieut. Col. Dundas and officers of 47th regt., Sir T. Dyer and family, Miss Eastwood, Mrs. Elkins, Miss Elmslie, Miss Elwyn, Mr. and Mrs. Engledue, Miss Evans, Lieut. and Miss Ewart, Mr. and Miss Farron, Capt. Fegan and family, Mrs. Ferns, Mrs. Foote, Mrs. and Miss Foster, Lieut. and Mrs. Franklin, Miss Gaim, Mrs. Galloway, Lieut. Col. Gibson and officers of R. M. A., Capt. and Miss Gordon, Mrs. and Miss Gore, Lieut. Gough, Mrs. Gould, Capt. Graham, Mr. and Miss Grant, Miss Grazelier, Capt. Greathead, Genl. Greaves, Capt. and Mrs. Grenfell, Mr. and Mrs. Greville, R. Haig, Esq., Secretary, Mrs. Haig, and family, Mr. and Mrs. Hale, Mrs. Hall and family, Miss Hallingham, Capt. Hallowes and family, Miss Hanbury, Mrs. Hancock and family, Lieut. Col. and Lady Harcourt, Mrs. Harden, Sir T. Hare, Mrs. Harris, Capt., Mrs. and Miss Harrison, Mrs. Harward, Sir T. and Lady Hastings, Mrs. Hawes and family, Capt. and Mrs. Hayes, Miss Haymes, Mr. and Mrs. Hellister, Miss Henderson, Mr. Hendry, Mr. and Mrs. Herbert, Mr. Hickley and family, Mrs. Hill, Mrs. Hillyer, Mrs. Hoffmeister and family, Mr. Holbroke, Mr. Hoskins and family, Mr. Houston, H. Hughes, Esq , Miss Hull, Dr., Mrs. and Miss Inman, Mrs. Irvine, Mr. and Miss Jenkins, Mr. Mrs. and Miss Jenverin, Mr. Jesse, Col Jones, and the officers of Royal Marines, Mr. and Mrs. Jones, Mr. and Miss Johnson, Mr. Katon, Col. Kenedy and family, Mrs. Kennedy, Mr. Kettle, Mr. Kerrigan, Mrs. King and family, M'Gregor Laird, Esq., Mr. Langley, Col. Lascelles and officers Grenadier Guards, Capt. Lascelles, Capt. Lawrence and family, Sir H. Leake, Lord W. Lennox, Mrs. Levis, Mr and Mrs. Lewis, Capt. Liardet and family, Mrs. and Miss Livesay, Mrs. Lloyd, Miss Lovett, Miss Luard, Col. McCallum and family, Capt. M'Coy, Mr. McKillop and family, Mr. and Miss MacLean, Mr. and Mrs. Macnamara, Mrs. Maddock and family, Miss Mak, Lady Malcolm, Mr. Mangin, Capt. Matson, Mrs. and Miss Matson, Mrs. Melvin, Major Mercer, Mr. Mickle-thwaite, Miss Mill, Capt. Milligan, Capt. Milne, Mr. Minchin and family, Com. Mitchell, Mr. Mitchell, Sir W. and Lady Montague, Mrs. Montague, Mrs. and Miss Morgan, Sir J. Hon. Lady and Miss Morris, Dr. Mortimer and family, Capt. Mowbray and family, Sir C. and Lady Napier, Capt. Napier, Miss Neville, Mrs. Nicholls, Lady L. Noel, Earl and Countess Northesk, Capt. O'Brien, Mr. O'Malley, Sir J. Lady and Miss Ommaney, Misses Omroyd, Otter, and Ouston, Mr. Paddon, General Sir H (Governor). Hon. Lady Pakenham and family, Rev. Mr. Pannet and family, Miss Park, Adml. H. and Mrs. Parker, Mr. Parnel and family, Mrs. Patton and

family, Mrs. Paul, Mrs. Peacock, Miss Peel, Mrs. and Miss Penruddock, Mr. Peyton, Signor Perullo, Major Pipon, Misses Pitcairn & Pope, Mrs. Pottle, Miss Powell, Adml. Poyntz, Mrs. Prance, Mrs. Prettyman, Mrs. J. and Miss Prevost, Miss Prior, Capt. Pritchard and family, Mr. and Mrs. Purdoe, Mrs. Read, Capt. and Miss Purvis, Com. Ramsay, Mr. & Mrs. Ramsbottom, Mr. Ramsden, Mrs. Richards, Capt. and Miss Richardson, Mrs. Rickman, Mrs. Ridge, Capt. Roebuck, Lieut. Rowles, Adml. Sir C. Rowley, Capt. and Mrs. Rowley, Lieut. Col. Rowley, Dr. Rundell, Mr. Sabben, Mrs. Sadler, Capt. Samuels and family, Mr. Sandys, Lieut. Savage, Miss Sawyer, Capt. Schomberg, Dr. and Mrs. Scott, Capt. Searle and family, Vice Chancellor and Lady Shadwell, Mrs. Shapnell, Mrs. Sheringham, Mrs. Simmil, Rev. Mr. Sismore, Mr. Slowork, Mr. Snell, Mrs. Standish, Hon. Sir F. and Lady Stapleton, Dr. and Mrs. Stewart and family, Mrs. C. Stewart, Sir J. and Lady Stirling, Mrs, Strong and family, Miss Stroud, Mr. and Mrs. Sturdy, Mrs. Sutherland, Mrs. Swale, Mr. Swinburne, Mr. and Mrs. Taylor, Mrs. and Miss Thompson, Lord Torrington, Lieut. Col. Trevor and officers 59th regt., Mrs. Trevor, Mr. and Mrs. Lake, Miss Vaughton, Lieut. Virris, Mr. Vinter, Mr. and Mrs Walker, Mr. and Mrs. Waller, Mrs. Wallis, Miss Wallop, Adml. Mrs. and Miss Warren, Capt. and Mrs. Warren, Mr. Watts, Sir H. and Lady Webster, Lieut. Welch, Lady West, Mrs. West, Major White and family, Lieut. White, (dragoons). Mr. Wilcox and family, Lady and Miss Williams, Mr. and Mrs. Willes, Mr. and Mrs. Willis, Sir H. Willoughby, Capt. and Mrs. Wilson, the Misses Wilkinson, Capt. Wimper, Mrs. Wiseman, Capt. Wood and family, Com. and Mrs. Wood, Lieut. and Mrs. Wood, Earl of Yarborough, Miss Yates, Mrs. Young.

The following were the officers who composed the Committee of Management, all of whom were incessantly engaged in effecting the extensive arrangements.—

Commanders, Sheringham, of the Fearless; Crawford, Mutine; Lowe, Excellent; Thompson, Espiegle; Matson, Daring; Lieutenants, Wiseman; Fairholme, Excellent; Read, Fearless; Hon. G. Kerr, Flying Fish; Herbert, Daring; Freze, Osprey; Coventry, Waterwitch; Reid, Pantaloon; Hinde, Cruiser; Hon. T. A.. Pakenham, Mutine; Dewes, Espiegle; Fead, Queen; Cheere, St. Vincent; Dr. Clarke, Mr. Pechell, Excellent; Dr. Coulter, Firebrand; Mr. Fegan, Fearless; Mr. King, Cruiser; Mr. Furneaux, Mutine; Mr. Jackson, Queen; Mr. Tattnall, St. Vincent.

All the above gentlemen, with the Commander-in-chief, and Lord Adolphus Fitzclarence, wore decorations at the Ball, attached to white ribbons hung round their necks.

The following is a list of the naval officers who contributed towards the entertainment, classed under the names of the ships to which they respectively belong.

St. Vincent.—Capt, Rowley; Commander Glanville; Lieutenants, Twiss, Cheere, Triscott, Jenner, Norcock, Rowley, Prevost, Compton; Captain Marines, Willes; Lieutenants Lewin, Astlett, Gritton, Swain; Master, Elson; Mates, Darrell, Gwyne, Harwood, Kennedy, Rooke, St. John, Tattnall; Midshipmen, King, Mends; Surgeon Drummond; Assistant-Surgeons, Bateman, Haire; Chaplain, Marshall, M.A.; Paymaster and Purser, Mason; Naval Instructor, Hodgson; Second Masters, Brodie, Pyper.

Queen.—Captain Martin, Commander Morgan; Lieutenants, Loring, Fead, Whipple, Ewart, Hall, Preedy; Captain Marines Clendon, Lieutenants, Manger, Gwyn, Buck; Master, Bellamy; Mates, Arkwright, Blake, Jackson, Mansfield, Simpson; Midshipmen, Addington, Pym; Surgeon, Bruce, MD.; Assistant-Surgeons, Trevan, Fisher; Chaplain, Lewin; Paymaster and Purser Jennings; Second Master, Anderson; Naval Instructor Barnes.

Victory.—Captains Mowbray and Ellice; Commander Wilcox; Lieutenants Godench, Hancock, Smith, Hall, Hickman, Jones, Inglis, Cracroft; Lieutenant Marines, Sayer; Master, Aylen; Chaplain, Richards; Surgeon,

Acheson; Mate, Carnegie; Midshipman, Campbell; Paymaster and Pursers, Goddard, Russell; Assistant-Surgeons, Russell, Collings, Duigan; Chaplain, Richards, Second Masters, Read, Hartfield.

Excellent.—Captain Sir T. Hastings; Commander Lowe; Lieutenants, Wiseman, Christopher. Moorman, Burton, Bourchier, Austen, Hoffmeister, Fairholme, Mould, Popplewell, Veitch, Sandom, Shewen, R.M., Gell, R.M., Mates,—Bland, Bellis, Butler, Byng, Beale, Jackson, Maunsell, M'Kenzie, Molyneux, Parish, Robertson, Swinburn, Brandreth, Cerjat, Pechell; Midshipmen,—Byng, Bishop, Palliser, Scott, Sampson, Stirling, Jones, Jerden, Jukes; Surgeon Dabbs; Assistant-Surgeons Clarke, Slevin; Chaplin Main; Naval Instructor Starke; Paymaster and Purser Wadland; Second-Master, Wallis; Clerk in Charge, M'Dowell.

Victoria and Albert.—Captain Lord A. Fitzclarence, G.C.H.; Commander Hall, Lieutenants Tringham, Browell, Robson; Master Ellis; Surgeon, Greenish; Paymaster and Purser Bell; Assistant-Surgeon Minter; Second-Master Thain.

Flying Fish.—Commander Harris; Lieutenants Robins, St. Leger, Kerr; Master Pullen; Surgeon Banks; Paymaster and Purser Ficlore; Assistant-Surgeon, Bremmer.

Firebrand.—Captain Corry; Lieutenants, Sharpe, Gordon, Barnard, R.M.; Master, Russell, Mates, Burrough, West, Courtenay; Midshipman Stirling; Surgeon Coulter; Paymaster and Purser, Prance; Assistant-Surgeon Willis; Second-Master, J. Thomas.

Sylvia Cutter.—Lieutenant Turnour.

Cruiser.—Commander Fanshawe; Lieutenants,—Rodney, Kevern, Hinde Master, Andrews; Mate, King; Midshipman Cotter; Surgeon, Wallace.

Pantaloon.—Commander Wilson; Lieutenants, Hall, Reid; Master Crout; Mate, Mann; Midshipmen, Page, Peel, Rawlings, Rogers; Surgeon Robertson; Paymaster and Pursers, H. W. Sadler.

☞ Clio.—Commander Fitzjames; Lieutenants, Hollingsworth, Le Visconte; Master, Langtry; Mates, Fitzgerald, Hickley; Surgeon, Sloan; Paymaster and Purser, Biggs; Assistant Surgeon, D'Auvergne,

Volcano.—Lieutenant Miller; Assistant Surgeon, Boland; Second-Master, Loveridge.

Mutine.—Commander Crawford; Lieutenants, Curzon, Pakenham, Mends; Master, Renaud; Mate, Furneux; Surgeon, T. L. Beveridge; Paymaster and Purser, Brooman; Assistant Surgeon, Edmonds.

Dwarf.—Lieutenant Chamberlain; Mate, Fletcher; Assistant-Surgeon, Heath; Clerk, Spear.

Comet.—Lieut.-Com. Prettyman, Assistant-Surgeon, Babington; Second-master, Braddon; Clerk, Macdonall.

Fearless.—Commander Sheringham; Lieutenants, Read, Wood; Master, Taylor; Mates, Stoddart, St. Leger, Wood; Assistant-Surgeon, Fegan; Clerk, Elkens.

Daring.—Commander Matson; Lieutenants, Stoddert, Rolland, Herbert; Master Sturdes; Mate, Woke; Midshipmen, Kingston, Freeke, Fox; Surgeon Ferguson; Purser, Mowbray; Assistant Surgeon, Clarke.

Waterwitch.—Commander Birch; Lieutenants, Prevost, Coventry; Master, Harper; Mate, M'Naughten; Surgeon, Douglas; Purser, Weaver.

Espiegle.—Commander Thompson; Lieutenants Dewes, Young, Cumming; Master Garwood; Mate, Dunn; Surgeon, Park; Midshipman, Barlow; Assistant-Surgeon, Shane; Purser, Lewis.

Dockyard.—Mr. Brown, Master Attendant; Mr. Purdoe; Mr. Sabine, Assistant-Surgeon.

Royal Naval College.—Mates,—Amphlett, Desvœux, Hood, Shipley, Smith.

Haslar Hospital.—Assistant-Surgeon Dengan.

Grand Banquet at Portsmouth.

This entertainment by the inhabitants of Portsmouth took place on Saturday evening, at the Queen's Rooms, on the Milldam, in the town of Portsea, on which occasion the room was very handsomely fitted up. On the outside of the building a spacious tent was erected, to serve for an entrance hall, which was very appropriately ornamented with flags of England and France, which floated from staves rising to the height almost of the building itself; the interior was fitted with evergreens, wreaths of flowers, arranged in unique devices, and at the entrance to the hall of the room in which the dinner was laid, were the letters "V." and "L.P." in various coloured lamps, surrounded by flowers and evergreens, and on the right of the tent was "His Majesty Louis Philippe welcome," in splendid lamps, with the English and French ensigns on either side. Ascending the steps through the entrance-hall of the building, the banqueting-room presented itself in full array. At the head of the room was a full-length portrait, by Hayter, of her Majesty, supported on the right by "the flag that braved a thousand years the battle and the breeze;" and on the left by the French tricolour. Underneath, and crossing the full length of the room, was a dais for the most distingushed guests; the Mayor, Edward Casher, esq., in his robes of office, presiding, supported on his right by Major-General the Hon. Sir Hercules Pakenham, K.C.B. Lieutenant-Governor of Portsmouth Garrison; Captain Hernoux of the *Belle Poule*; Colonel Brandreth, R.A.; Baron de la Ronciere Lenoury, Aide-de-Camp to Vice-Admiral La Susse; Colonel Trevor of the 59th; and on the left by Rear-Admiral Hyde Parker, C.B.; Captain Graeb, of *l'Inflexible,;* Colonel Cardew. R.E.; Lord Yarborough; and Mr. Louis Vandenberg, jun. His French Majesty's Vice Consul. The dinner was supplied by Messrs. Gunter, and the wines by various competitors. All were first-class, and the dinner by Messrs. Gunter requires no eulogium. On each side of the room were galleries erected for the ladies, who were very numerous on the gratifying occasion, and superbly dressed, which gave a charm to the banquet. The ladies were supplied gallantly with champagne and fruits, and remained until a late hour. The galleries were supported by pillars, which were ornamented by various ensigns being entwined around them, fastened with bouquets of flowers and evergreens. The whole had a very pretty appearance. There were three tables running the whole length of this fine room, with a cross table below the dais; at the centre one sat Colonel Gibson, Royal Artillery. At the bottom of the Grand staircase was stationed the magnificent band of the Royal Marines, and over them, near the ceiling, in an orchestra erected for the purpose, was a band of stringed instruments. The Whinchester Choral and Philharmonic Society's best members attended, and executed some fine songs, as the "Old English Gentleman," and a few glees, in a superior style. The cloth was not drawn after the dinner. The want of room was very manifest in the minor departments, as for instance, there was no cloak room, and the hats of the company were obliged to be placed under the chairs. This however was no grievance, and better pre-

served that necessary article than having them all huddled up, as at the naval ball, where many were lost and exchanged, as well, by the way, as purses, &c. The *tout ensemble* was worthy of the inhabitants of this great naval port, and reflects the very highest credit upon the committee who arranged and perfected the whole.

Grace having been said by the Rev. G. W. Livesay, A.M. of Southsea, domestic chaplin to the Earl of Errol. The company, consisting of British and French officers of both services, together with a number of civilians, inhabitants of Portsmouth, amounting in all to about 250 sat down to dinner.

The invitation list received a considerable acquisition on the unexpected arrival of the *Belle Poule* frigate of 60 guns, and the *Inflexible* 84, on Saturday morning.

The dinner was an admirable one, and consisted of every luxury and delicacy the imagination could invent, or the most finished epicure wish for—real turtle, venison, &c., and wines of the most delicious flavour and vintage. The dinner being concluded, "*Non nobis Domine*" was sung, and a bugler of the 76th Regiment, who was stationed at the left end of the platform, sounded the call to attention to the proposition of each toast, or for the speakers, assisting that right royal toastmaster, Mr. Toole, of London, in the performance of his onerous office.

The chairman rose, and proposed "Her Majesty Queen Victoria."

The toast was drunk with the greatest enthusiasm, and followed by three times three. Air "God save the Queen!"

The Chairman next proposed, unaccompanied by comment, the toast, "His Majesty Louis Philippe 1, King of the French."

This toast was also received with the most enthusiastic demonstrations of applause. It was followed by several rounds of cheers, amidst which shouts of "Vive le Roi!" were raised, and there was a general waving of handkerchiefs by the ladies sitting in the galleries.

The military band then struck up "La Parisienne," during which the whole of the company stood up, as they had previously done during the performance of "God save the Queen." At the conclusion of the air, several cheers more were raised; after which "Vive le Roi" was sung.

The chairman then gave—"Her Majesty the Queen Dowager, Prince Albert, the Prince of Wales, and the rest of the Royal family;" and immediately afterwards "Her Majesty Amelie, Queen of the French, and the rest of the Royal family of France." Both toasts met with the most rapturous reception, the first being followed by the air of "God save the Queen" and the second by "La Parisienne."

Mr. L. Vandenburgh, jun. (the French Vice-Consul at Portsmouth) responded to the toast as the representative of the French nation in that place. In returning his sincere thanks to the company for the honour they had just paid to Her Majesty Queen Amelie and the rest of the Royal family of France, he assured them that the reception which the inhabitants of Portsmouth and the rest of ths English public had given to the King of the French had been highly gratifying to the French Royal family—(cheers). The present occasion, which had brought together the French and British officers in social and friendly union, would be considered a great day in France (applause); and they might rest assured that he would not fail to communicate to her Majesty the

Queen of the French the honour they had done her. On her behalf he begged them once more to accept his sincere thanks—(cheers).

Rear-Admiral Parker then rose, and said that he had received permission from their president, the mayor, to propose a toast. He therefore gave "The Baron Mackau, and the French navy;" and he particularly included in the toast those French officers who had done the British the honour of dining with them that day. The toast was received with loud and repeated cheering.

Captain Hernoux of the *Belle Poule* frigate, acknowledged the toast which had been just drunk, and proposed the following toast, "A Lord Haddington et à la marine Anglaise." Captain Hernoux, as well as the other French officers who had to propose or acknowledge toasts, addressed the company in the French language. In many instances, as in this, the toasts were given without any accompanying observations.)

The toast having been warmly greeted, the band played a piece of music, but not the usual air of "Rule Britannia," which it was supposed was omitted on this occasion from a feeling of delicacy towards the French guests.

Rear-Admiral Parker returned thanks for the honour which had just been done to the British navy by his friend Captain Hernoux. He only trusted that the British and French navies would long remain as good friends as they were at that moment.—[Loud cheers.]

Sir H. Pakenham (Lieut.-Governor of Portsmouth) then rose to propose a toast, and was received with cheers. He said he had promised to give a particular toast, and he was happy to see the day when he could do so with sincerity,—(cheers). (Here some amusement was occasioned by the gallant speaker, who seemed not at all anxious to be interrupted in his address even by plaudits, observing, with a good deal of bluntness "Now do hold your tongues, gentlemen,") The toast which it had been intrusted to him to give was "Marshal Soult and the French army."—(Applause). He was not presumptuous enough to attempt any eulogy of the French army. The proud record of their feats was emblazoned in the brightest pages of the history of Europe from the earliest modern times to the present day; and the enthusiastic reception which the English had given to the Marshal Duke of Dalmatia, when he was intrusted by the King of the French to carry his felicitations to our august Queen on the occasion of her coronation, convinced him that the present company would receive the toast with the greatest pleasure. He, therefore, with the utmost confidence, now left it to them to pay due honour to the gallant Marshal and his chivalrous followers—the French army.—(cheers.)

The toast was drunk amidst continued rounds of applause.

Captain Graeb, of the *Inflexible*, expressed his gratitude for the honour done the Duke of Dalmatia and the French army, and in return proposed to the company to drink, Au Duc de Wellington, et à la valeureuse armée d'Angleterre." The word valeureuse was in addition to the toast, which Captain Graeb made evidently of his own accord, for the toast as it appeared on the printed list was simply "An Duc de Wellington et à l'armée Anglaise."

The toast was received with the greatest applause.

Sir H. Pakenham, on behalf of his Grace the Commander-in-chief returned thanks for the honour the company had conferred on the service to which he belonged. On ordinary occasions, the returning of thanks was something like a mere matter of form; but they were now under peculiar circumstances. His Majesty Louis Philippe, the chosen King of the French, was now on a visit to our august Sovereign the Queen of England, and the armed forces of both countries were in a state of amity and good understanding. He trusted that this mutual good feeling would long continue for the advantage of the world in general, and for the peculiar benefit of the respective countries of England and France. (cheers.) At the same time they must not consider, if this happy state of peace did continue unbroken between them, that their armies were to be unemployed. It was matter of historical fact, that the greatest improvements in the world had been brought about by the armies of civilized nations acting against barbarism, and in this respect they would still find employment. He might support his observations by a reference to a variety of facts. The first elements of civilization were introduced into this country by the legions of Cæsar. At that time, instead of what he now beheld above him (alluding to the ladies in the galleries,) the matrons and maidens of England walked the woods painted in blue and rubbed over with ochre. (laughter). The dormant energies of Egypt were awakened by the great Napoleon, and every person able to form a just estimate of human power must acknowledge the paramount genius of that extraordinary warrior. (cheers) Referring to our own empire, what, he asked, had saved India from a set of barbarous hordes ravaging each other's districts, but the British armies? And now at the present moment, what the British troops had accomplished for India, the arms of France were about to effect for North Africa. On all these occasions there must be great difficulties to overcome at the beginning; but he had no doubt that the noble Princes who conducted the French army would eventually lead it to success. But come what might, he was at all events satisfied that both services in both countries would exert their best energies in defending, under all circumstances, the honour of their respective Sovereigns and the interests of their country. (loud cheers.)

Mr. Hoskins (ex-Mayor of Portsmouth) then proposed the next toast "M. Guizot and Sir R. Peel, the respective Prime Ministers of France and England." In doing so he said he could not omit the opportunity of congratulating all present on that auspicious occasion. It was impossible to regard it without feelings and emotions of the most gratifying nature, whether they considered the individuals of which the assembly was composed, the occasion on which it was convened, or the circumstances under which it was attended—all combined to render it a scene of more than ordinary excitement, and a spectacle of surpassing interest--(cheers) It was an occasion for the extension of personal courtesy, and the exhibition of national cordiality—(cheers) They were met together for the purpose of doing honor to the brave and distinguished officers of the French nation who were their guests that day, and through them of doing honor to that great and intelligent nation of which they were citizens—(cheers.) In the name of the inhabitants of Portsmouth, of that assembly, the population of the empire, and, he would add, on be-

half of our fair countrywomen, he gave them a cordial, sincere, and hearty welcome to the shores of Great Britain—(cheers.) It was most gratifying to the ancient port and borough of Portsmouth to see around them on that occasion, so many of our own noble and distinguished officers of both services, for the purpose of joining in the festivities, and partaking of that hospitality they desired to show to our highly honoured continental neighbours—(cheers.) It was delightful to witness the national banners of France and England, the uniforms, naval and military, of both these great countries, and the plain and sober costume of the citizens, one and all in harmonious unison—a lasting emblem of that union which ought ever to subsist, and that cordiality which ought ever to be felt between the officers and citizens of both nations—(cheers.) It is impossible for Englishmen to forget the kind, cordial, magnificent reception, which our most gracious Queen Victoria met with from the French on her visit to that country, or to remember that circumstance without feeling an earnest and anxious desire that his Majesty King Louis Philippe, when honouring our shores by a visit to our country and Queen, should be received with demonstrations of respect not less ardent, and with a reception and welcome not less enthusiastic (hear.) (Here the eloquent gentleman seemed so exhausted by his earnest and impressive mode of delivery, that he stopped a few seconds to wipe off the perspiration which was running in streams down his face. This called forth an increased burst of applause from all assembled.) If British voices that rent the air with their acclamations on the landing of his Majesty the King of the French spoke the sentiments of the nation, he would say, that entertainment to the distinguished officers of Louis Philippe no less exhibited the genuine and sincere feelings which animated the breasts of the British people towards the country they represented. Mr. Hoskins then entered into a warm eulogium of the King of the French on the presentation of the address of the corporate body, saying it was impossible ever to forget the dignity, ease, cordiality, and kindness of the reception. The reply which that august Monarch made, in manner, earnestness, candour, and the energy with which it was delivered, impressed every one who heard it with its sincerity. The sentiments which were conveyed in that reply were worthy of a King (cheers); they were the offspring of a sound and enlightened understanding—the emanations of an enlarged and enlightened mind—the effusions of a warm and generous heart. That reply convinced them that his Majesty meant to convey that his visit to England was not a mere matter of state and royal ceremony, not even confined to personal respect and esteem for our beloved Monarch; but to it may be added a higher, nobler, and more exalted object—the cementing the united feelings of cordiality and esteem of two great nations over which these Monarchs reign (cheers.) His Majesty inculcated the importance and necessity for the prosperity, welfare, and happiness of these nations, that peace should be maintained. In those sentiments our Sovereign gave proof of her kind participation, and he was sure the inhabitants of both countries shared in the same glorious sentiments. It is a happiness that the counsels of the Monarchies of France and England are under the guidance of two distinguished statesmen, whose names he had the pleasure of introducing. When he men-

tioned the names of M. Guizot and Sir Robert Peel, he was satisfied they would agree with him, that they were men of the highest eminence and unquestionable honour, and that they will carry out as far as they possibly can, the patriotic wishes of their respective Sovereigns in the maintenance between France and Great Britain of the benefits and blessings of a solid, enduring, and honourable peace. (Loud cheers.)

The toast was drunk amidst loud cheers.

Mr. Howard, sen. said, that he was also anxious, in the name of the inhabitants of Portsmouth, to give to the officers of the French squadron a welcome to the shores of Great Britain, and before sitting down he proposed the health of "Vice Admiral de la Susse, Commander-in-Chief, and the officers of the French squadron." The toast was received with continued cheers.

Baron de la Ronciere Lenoury (Aide-de-Camp to Vice Admiral de-la Susse) acknowledged the toast. He said he was commissioned to express on the part of Vice Admiral de la Susse, who had gone to Windsor that day, and was thereby prevented attending the present assembly, and on the part also of the French officers of the French squadron, the gratitude they felt for the compliment which had thus been paid them. He concluded by proposing to drink "A l'Admiral Sir Charles Rowley, Commandant-en-Chef à Portsmouth.

Captain Rowley (son of the gallant port admiral, and flag captain,) said if his father's health had not been proposed in the kind and feeling manner in which it was by the noble baron, and responded to by the company, he had been desired by Admiral Rowley to assure the officers of the French navy, the mayor, corporation, and company assembled, how deeply he regretted that the state of his health would not permit him to attend that evening to have testified to the officers of the French navy, and the civic authorities, how sincerely he participated in the sentiments expressed towards them, and the joy and satisfaction at their reception there. For himself, he (Capt. R.) begged to express to Baron de la Ronciere his warmest acknowledgments, and he should have great pleasure on his return in communicating to his father the kind proposal and reception of the toast, which he was sure would increase his regret at not being present. He (Capt. R.) could not help referring to the honour specially conferred upon him on the visit of his Majesty Louis Philippe. He was the officer appointed to steer the King to the shores of England—(cheers). The gallant captain repeated the last sentence in French.

The next toast was proposed by Louis Vandenbergh, jun. Esq., who said, from the good feeling that had existed that evening in the reception of the toasts given to the French nation, he was perfectly satisfied that the one he had the honour specially to propose on that occasion, would be received with the same enthusiasm and friendship as those which had preceded it. He would not dwell on his merits, but would merely propose "The health of Count St. Aulaire the representative of the French nation at this country."—(cheers.)

M. Bouet, captain of the *Pluton*, proposed, in French, "The health of Major-General the Hon. H. Pakenham, Lieut.-Governor of Portsmouth." The gallant captain paid a high compliment to the Lieut.-

Governor, as an officer of the brave British army, which had given such numerous proofs of its valour on different occasions.—(cheers.)

Sir H. Pakenham again rose and said, he returned his most sincere thanks for the manner in which his health had been proposed and drunk. In the discharge of his duties, as Commander-in-Chief of the south-western district, he had humbly endeavoured to follow the instructions of her Majesty, and to consult to the fullest degree the welfare of all her citizens, as well as that of her army so devoted to her Majesty. It was his desire to show, as far as possible, how highly he appreciated the society in which his duty, as an officer, placed him.

Sir H. Pakenham then proposed "The President, Edward Casher, Esq." complimenting him on the sumptuous entertainment of which they had participated, and for the order and regularity of the proceedings.

The chairman returned thanks. He said it appeared to him as if he were under some delusion when he witnessed the scene before him, the union of French and English officers; but when he remembered the reception the corporation met with when with them, as mayor, he went on board the *Gomer* to present the address to the King of the French, it was no longer to him a matter of wonder. The chairman then detailed and remarked on the friendly manner of the King, observing that his conduct appeared more like the father of a nation come to see his children than a powerful monarch of a powerful kingdom. He could hardly tell who was the King at first, there was such an absence of formality and state. His Majesty did not look a foreign king, but more like one of themselves, an English gentleman. It needed no reference to the map of the world to show that France and England were neighbours, and he hoped they would ever continue as they ought, on the same friendly footing as neighbours generally were. The people of Portsmouth were too happy to return the kindness paid to her Majesty Queen Victoria on her visit to France, and they had no hearts (which he was sure they had) if the inhabitants of Portsmouth did not always receive Frenchmen with the most cordial feelings, and contribute to their comfort and gratification—(loud cheers.)

The "inimitable *Toole*" called for "special bumpers," when Dr, Charles Scott proposed "The Ladies," prefacing the toast by calling on the company as fathers, brothers, sons,—lovers, (but leaving out "husbands" it was supplied by the assembly, the gallant gentleman having been recently married to a most amiable and accomplished lady,) to do it justice.

A glee followed, "Oh Lady," which was unanimously encored.

The Compte de Valmont proposed "The Vice-presidents, Stewards, and other Officers and Members of the Acting Committee," thanking them in French for the attentive and hospitable conduct which had been observed towards the French squadron in the port, and expressing a hope that the present friendly feeling existing between France and England would never be disturbed.

Dr. Scott acknowledged the toast.

Captain Dieudonne, of the *Caiman*, in the French language, proposed "The Mayor and Inhabitants of Portsmouth and its Vicinity," observing with much animation that they had been so well received by the inhabitants of Portsmouth, that he begged, in the name of the

Officers of the French squadron, to express his thanks for the kindness shown to them, and he had much pleasure in proposing their healths.

The Mayor acknowledged the compliment.

Christopher Rawlinson, esq., the Recorder of Portsmouth, regretted that he was called on without notice to propose the last toast, embodying as it did almost the whole object of the meeting, and embodying as he believed one of the chief objects of the first man in Europe in visiting this country—the continuance of concord and amity between the two countries (cheers). That consideration alone induced him to attempt the introduction of the toast. He had not the honour which Captain Rowley had of conveying to the shores of England the King of the French; but he claimed for himself the honour, the first that ever fell to any person holding the position he did, of addressing, in friendly language, a King of France approaching our shores and coming within our territories; and he would say, never was a thinking body of men so received as was the corporation of Portsmouth. They were received as thinking men of a neighbouring and friendly country, by a man who owes his throne to the intelligence of one of the most enlightened nations of Europe. There could be no adequate idea formed of the feeling or expression with which the reply was delivered on that occasion. The beautifully turned sentences are lost—the animation and action of the man are lost; but he (the Recorder) remembered his heart was touched when the King, speaking with that warmth of soul on the necessity and experience of peace between France and England, said, "I look upon the cordial union of the two countries as the keystone of the arch which supports the peace of the whole world." This expression should be engraven on our hearts—this should be recorded in the annals of our country. Was there ever a truer or finer sentence uttered by an Englishman? No language could be more perfect—no metaphor more beautiful! Is it not true? He believed with the King of the French, that the union of the two nations—the first in civilization, the first in force of arms—is the best guarantee we have for true liberty to the world. In all countries there are always some war spirits, whose jealousy of others blind them to a satisfactory termination of any difficulty or accidental dispute which must, constituted as they are, occasionally arise; but in the hands of such a man as the King of the French, and of the persons occupied in the government of this country, this feeling will not be allowed to run to excess, and under such governments this spirit will be checked; for it is impossible that two such nations, seeing how dependent they are on each other, can be on any other terms than those of cordial peace, when the King of one of them spoke the words, which he would again reiterate—"I look upon the cordial union of the two nations as the keystone of the arch which supports the peace of the whole world."

The Recorder concluded his address, which was attentively listened to, by proposing the toast "May the friendly relations between France and England long continue."—(loud cheers.)

The party immediately afterwards broke up, at the early hour of ten o'clock, the rain descending in torrents.

Departure of the King of the French from Windsor.

On Monday morning the visit of the King of the French to her Majesty, at Windsor, terminated with his departure for France, accompanied by her Majesty and Prince Albert, on their way to the Isle of Wight. It had been arranged that his Majesty the King of the French should embark from Portsmouth on board the *Gomer* for Treport; and that her Majesty and the Prince, who had resolved to spend a short time at the Isle of Wight, should accompany his Majesty as far as St. Helens, where after lunching on board the *Gomer*, with his Majesty, they were to go on board the *Victoria nnd Albert*, the Royal yacht, and proceed at once to the Isle of Wight, where they were expected at about five o'clock in the afternoon. These were the arrangemeuts at the time the court left Windsor on Monday morning; but an unfavourable weather led to a total change in the 'plan, and the alteration of the route of the King of the French, as well as a delay in the trip of her Majesty and the Prince to the Isle of Wight.

The weather was rather fine than otherwise, up to about half-past ten or eleven o'clock on Monday morning, but at the latter hour it began to rain heavily. The wind was also very high, and the weather was altogether stormy. The carriages of her Majesty and of the King of the French, containing servants and baggage, were sent on to the Farnborough station according to previous orders, though the departure of the carriages was delayed much beyond the hour originally fixed upon. Notwithstanding the unfavourable weather a great number of people had collected in Windsor, about the Castle and in the streets, to witness the departure of their Majesties, and every available vehicle was in requisition by those who wished to accompany the royal *cortege* as far as possible on the road.

At twelve o'clock the carriages of her Majesty and of the King of French, and of their immediate suite, were drawn up to the door of the great entrance of Windsor Castle, and in a few minutes after having taken leave of the Duchess of Kent, who accompanied them down to the bottom of the great staircase, their Majesties, the Duke de Montpensier and Prince Albert, took their departure, attended by M. Guizot, Count de St. Aulaire, Count de Jarnac, the Baron Athalin, General de Rumigny, the Earl of Liverpool, General Wemyss, Colonel Bouverie, the Countess of Gainsborough, and the whole of their respective suites. An escort of Horse Guards accompanied the royal party down the Long Walk and through the Park to Blackness. The royal *cortege* proceeded to Farnborough by the same route as that by which they came to Windsor, and there were parties of Lancers and Guards to escort them to the Farnborough Station.

At Farnborough the fittings up at the station were most elegant. A private carriage road leading to the chief entrance door, at the back of the station, had been set apart for their Majesties' sole use, and from the entrance door to the door which leads to the platform, a costly and most beautiful carpet of crimson damask, with an elegant border of gold colour, was laid down. On either side of the passage way were reception rooms, for the use of the Royal personages and their suites. The

room prepared for her Majesty was fitted up in a style of remarkable elegance and taste. The gold filagree work traced on the ceiling was particularly beautiful, and the furniture of the room was also unostentatiously and appropriately rich and splendid. At the station the directors and officers of the railway were assembled to receive their Majesties. A few ladies were admitted within the station to witness the departure, and outside and around there were assembled a vast number of people, notwithstanding the heavy rain that was falling at the time. The tricolour flag waved from the station, as well as the royal standard. The royal carriages reached the station at a quarter to two o'clock. Her Majesty alighted at the door, and was escorted by the King of the French into her reception room, followed by the Prince and the Duke de Montpensier. The directors were at the entrance and received her Majesty. At a few minutes to two o'clock the royal party came out, and entered the state carriage amidst the loud cheers of the people. It was still raining heavily when the train started, at five minutes to two o'clock. The engine was driven by Mr. Locke. Upon the engine there was the tricolour flag, and on the tender the royal standard. The train proceeded at a very rapid pace towards Gosport.

At several places on the line the tricolour flag was set up on the way-side. At Basingstoke the tricolour waved from the station, where a considerable number of people were assembled, who cheered lustily as the train came up. There was also a band of music and the National Anthem was played. A delay of a minute or two took place here while the wheels of the carriages were attended to, so that the people had a good opportunity of seeing their Majesties and cheering them, which they did to the top of their voices. At Andover-road there were persons collected, and at Winchester a considerable number, including some soldiers, but not under arms. At Bishopstoke there was a considerable number of people, who cheered loudly as the train passed; and at Botley there was much preparation. Besides the tricolour flag there was a band of music, and a great crowd of persons. As the train shot by the band played the National Anthem, and the people cheered, but it was, of course, only the work of an instant. At Fareham, there was also many people. There was also a party of foot soldiers, who presented arms as the royal carriage passed.

At Gosport the station presented a most animated appearance as the train came up. The decorations were nearly the same as those which were prepared for the reception of the King of the French, On the triumphal arch at the place of exit, however, there was a fresh inscription, "Welcome Louis Philippe, Victoria and Albert." The station was filled with well dressed persons, chiefly ladies; and there was a party of foot soldiers, who presented arms as the royal carriages came up, the band playing the National Anthem. The directors had come on in the train, and were ready to receive their Majesties as they alighted. It is needless to say that the spectators cheered most enthusiastically.

The train entered the station at thirty-five minutes past three o'clock, having left Farnborough at five minutes to two. Their Majesties, with the Prince and the Duke de Montpensier, alighted immediately after their arrival at the station, and proceeded at once to the carriage, fol-

lowed by their respective suites. They drove off towards the Victualling-yard (the place of the intended embarkation) amidst the cheers of the multitudes of people, who, notwithstanding the rain, had assembled on the way-side. The road was lined on either side with foot soldiers from the station to the yard.

As the royal cortege passed along, the bands of the different regiments struck up, "God save the Queen," and at a quarter to four o'clock the Admiralty flag was lowered from its staff in the centre of the yard, and the royal standard substituted, as the carriage entered the yard. The *Victory* and the other vessels in the harbour were at this time dressed out in their gayest colours, and the yards manned.

Proceedings at Portsmouth.

Monday morning, at Portsmouth, was ushered in by the firing of guns from the *Victory* and all the ships at Spithead, on the arrival of the Lords of the Admiralty to receive the King of the French, her Majesty Queen Victoria, Prince Albert, and the royal family. Immediately on the flag of their lordships being hoisted at the masthead of the *Victory*, a salute boomed from her sides, which was quickly responded to by the *St. Vincent, Caledonia, Queen,* and the French line-of-battle-ships at Spithead, whose thunder called the good inhabitants of Portsmouth from their beds out into the "pelting of the pitiless storm," which had been raging all night with terrific violence. At about half-past twelve it thundered and lightened terrifically, and again between five and six, the rain descending at the same time in a deluge, which continued the whole of the morning. The ships at Spithead were dressed out in their gayest colours, every mast and yard being covered with the ensigns and signal flags of all nations. The inhabitants at an early hour flocked to the ramparts to see the gay sight, and many were the soakings they got from the spray which dashed over the walls, as the tide rose with uninterrupted rapidity, wetting to the skin all such as were green enough to venture there for the gratification of their curiosity. A more miserable day it was impossible to picture, all the elements seemed at war. About twelve o'clock, the troops, (76th, 59th, and Royal Marines,) marched down in bodies of 500 each, to cross the bridge to Gosport, and form the guard of hononr. Here again the excitement was renewed, the bands playing lively airs. The soldiers having all crossed, left the town in its previous state of miserable commotion, everybody rushing to the ramparts at the slightest symptoms of a movement from half a dozen people in that direction.

Notwithstanding the violence of the rain, which continued to descend in torrents, there were ample materials for observation—flags were displayed from every mast and spar in the harbour, which of necessity had a very enlivening effect. The Royal Standard was hoisted at the King's bastion, on Blockhouse Fort, Fort Moncton, the Victoria Pier, Southsea Castle, the King's Rooms, all the Government Offices on both sides the harbour, and the High Street Semaphore gave to the wind a line of colours of all kinds; the Pier was gaily decorated with the French colours and Union jacks, and crowded during the day many times with spectators, whom neither wet, thunder, nor lightning could prevent endeavouring to gain, if possible, a glimpse of the illustrious

monarchs. About one o'clock the appetites of the sight-seeing thousands were whetted by seeing the French squadron coming out of harbour, headed by the *Gomer;* this was imagined to be significant of the King's embarkation in her Majesty's yacht, on purpose to be escorted by his Royal hostess to Spithead. This received confirmation in the course of the day.

About half-past three o'clock, when the expectant multitude began to be weary of their task of watching, their loyal feelings were wound up to the highest pitch, by the thunder of a salute from the long 32's on the King's bastion, (where a most heart-rending calamity occurred, on firing the fifth gun,) quickly followed by the *Queen,* bearing the flag of Sir Charles Rowley, the Port Admiral (who had hoisted it on board that ship to make room for the Royal Standard at the main of the *St. Vincent,*) the *Caledonia, St. Vincent,* and all the craft which had at an early hour stretched away towards the French coast, the roar of whose guns produced an effect at once terrific and inspiring. The fleet at Spithead, with their gay ensigns floating from every part, from the main-top mast head down to the water's edge, at this time presented one of the most inspiriting and grand spectacles imaginable. The salute of twenty-one guns being over, each ship continued firing, not merely single guns, but whole broadsides—the flash, the thunder of which, seemed to shake the shore on both sides, and every building in the town seemed agitated as if by the effects of an earthquake. The firing was kept up in broadsides for a quarter of an hour. Houses were deserted—shops left without tenants; all rushed to the ramparts to witness the scene, which was more like an engagement of two powerful fleets, than an exhibition of rejoicing. Certainly those who never saw an engagement at sea, had now a most exact imitation of it, for a scene more approaching the awfully sublime could never be represented. The excitement thus most naturally caused in this apprizal of the arrival at the Royal Clarence Victualling establishment of our beloved Queen and Consort and their illustrious guest, of course was considerably increased as the fact thus announced satisfied every one that the royal party had really arrived—a circumstance which a few moments before was pretty generally doubted.

Every one was now on the tip-toe of expectation for the *Victoria and Albert* (which had been lying in the harbour with steam up and all ready for the reception of her royal mistress for some hours), notwithstanding the rain descended, and the thunder of Heaven's artillery pealed forth, accompanied by vivid flash after flash of lightning.

About half-past four one of the detachments of soldiers, which had formed the guard of honour, re-crossed in the floating bridge, and with the band playing at their head, marched up the High-street, back to their quarters. This looked like disappointment, which received further coloring by the return of the other detachments. However, the colors still flew at Spithead, and the yards continued manned on the *Victory*—consequently the anxious and weary multitude still tarried. The sun-set gun at length fired, when all the colours vanished, and like Cinderella, after the magic hour had struck, returned to their former appearances.

Arrival and Departure from the Clarence Victualling Yard.

Preparations had been made for the reception of the royal party in the Clarence Victualling Yard, where his Majesty, the King of the French, first landed on the shores of England, and which had also been selected for the embarkation on his return to his dominions, as being the spot most conveniently situated for the purpose. At the end of the Victuallig Yard, on one side of the water, was a wooden pier of considerable length, and as her Majesty and her royal visitor would have to pass along this pier in order to reach the boat which would have to convey them to the Queen's yacht, care had been taken to ornament it on each side with bunting; the footway, which was damp from the rain, being also covered over, as the time when the royal party were expected drew near, with a kind of sailcoth. At the extreme point of this pier a great number of boats, filled with persons anxious to obtain a view of the embarkation, had collected, and in spite of the weather, the occupants of these boats, maintained their position until nearly the close of the day.

In the Victualling Yard the guard of honour was composed of men belonging to the 37th, 59th, and 76th regiments, having with them the band and colours of the 76th. They amounted in number to about 200 men. At half-past two o'clock Sir G. Cockburn, Sir W. Gage, Lords of the Admiralty, Rear Admiral Parker, Captain Hamilton, &c. came across the water from the Dockyard, and landed at the pier in order to be in readiness to receive their Majesties. The Commander-in-Chief of the port, Sir. C. Rowley, notwithstanding his indisposition was also in attendance, as was likewise Sir H. Pakenham, Lieutenant-Governor of Portsmouth Garrison. Upon the landing of the Lords of the Admiralty, the union flag, which had been previously floating in the centre of the Victualling Yard, was hauled down, and the Admiralty flag hoisted in its place. Besides the officers previously mentioned, there were several others assembled at the lower part of the yard near the water. Among them were Captain Rowley, Lieutenant Smith, Lieutenant Prevost, &c. There were also in attendance Captain Carter, the Superintendent of the Victualling Yard, Mr. Town the Master-attendant, and the Rev. Archdeacon Wilberforce, rector of the parish of Alverstoke, in which the Victualling Yard stands, and one of the domestic chaplins of the Queen.

All the naval officers were in the fullest costume, and wore white trowsers. Such a species of habiliment was certainly not at all comfortable with the miserable weather which prevailed; but it happened to be the last day of the season when it is obligatory on the officers of the navy to wear white trowsers as part of their full dress.

Soon after three o'clock the call "Attention," passed quickly along the line of soldiers from the Railway Station to the extreme end of the Clarence Victualling Yard; and the cheers of the multitude outside becoming louder and louder every minute, at last convinced the favoured few who had obtained admission to the Victualling Yard, that the Queen, accompanied by Prince Albert and the Royal guests, were rapidly approaching. All was now bustle and commotion, every one

rushing to the ramparts to gain a view of the scene. The Duke of Wellington was in the yard on horseback, in his regimentals, but wrapped in a brown great coat, (like a sentry's coat,) buttoned up to the chin to keep off the rain, which was falling heavily at intervals during the time he had been expecting the arrival of the royal party.

The royal carriage drove into the yard, the bands playing, and salutes being fired in the harbour, and their Majesties alighted at the office of Captain Carter, the superintendent of the Victualling-yard, whence they were ushered into a room on the ground floor. Up to this time all things had gone on pretty well, with the exception of the heavy rain at intervals, to which the soldiers had been exposed for a considerable time. But the scene in the Victualling-yard was far from encouraging or inspiriting. All the preparations that had been made in anticipation of a fine day, and which looked so well on the occasion of the King's arrival, were more than thrown away, and the whole place wore a desolate and melancholy aspect, as the rain began to fall heavily and the wind to rise. At length after their Majesties had remained in the room for some minutes, the carriages still standing at the door, and the soldiers still presenting arms, it began to be whispered about that a change was to take place. Such, in fact, was the case; and a consultation took place, to which the Duke of Wellington was called in, as well as M. Guizot, Count de St. Aulaire, and Sir Hercules Pakenham, Sir Charles Rowley, and Rear-Admiral Parker, as to whether the King should proceed at all by the *Gomer*, or whether her Majesty and the Prince should not accompany the King back to Windsor, or at all events on his way to France, by some other route than direct to Treport. There was great doubt and confusion for some time. It appeared that a very heavy sea was running at the harbour's mouth, and from the state of the weather—a gale blowing—it was apprehended that if the King of the French attempted to cross to Treport, he might not be able to land there, as the coast is most unfavourable for embarkation in stormy weather. It was understood that, independently of the inconvenience to the King, of crossing under such circumstances, he was anxious to be able to relieve her Majesty the Queen of the French from all unnecessary suspense as to his arrival.

It had been suggested, that instead of going over to Treport in the *Gomer*, that vessel should be sent across to make the passage, and land if practicable, while the King of the French should go up to London by a special train, proceed thence to Dover by railway, and from thence to Calais or Boulogne, posting immediately to Treport. In the meanwhile, should the vessel succeed in landing at Treport, certain intelligence would be conveyed to the Queen of the King's movements. Mr. Town was sent for by the royal command to report as to the state of the weather outside the harbour, and also as to the time at which it would be low water.

Some time was spent in these consultations, and at last the resolution was taken that the King of the French should go by the route already indicated. Colonel Bouverie was immediately dispatched in a special train (which also took the Duke of Wellington) to London, to order the special train to Dover, and to send on an engine to order a steamer to be in readiness at the latter place. The train which took Colonel

Bouverie started nearly an hour in advance of the ordinary half-past five o'clock train, and it was then settled that his Majesty, the Queen, the Prince, and the Duke de Montpensier, together with the principal members of the suite, should go over to the house of Mr. Grant, the store-keeper, which is nearly opposite the office of Capt. Carter, where a hasty repast had been prepared, and where it was resolved that they should remain for three hours, until the King and the Duke started for London, and the Queen and the Prince embarked on board their yacht, where they had arranged to sleep that night (in the harbour of course), and to proceed on to the Isle of Wight in the morning. Orders were despatched to the French steamer the *Caiman*, to unship some of the baggage of the King of the French, which he wished to carry with him by the other route, and other orders were sent to ship the Queen's baggage on board the royal yacht.

Before the arrival of the royal party in the Victualling-yard the rain had already commenced to fall heavily, and the report in the *Times* says—the circumstance of a vivid flash of lightning, accompanied by a long roar of thunder, occurring just before their entry, was the cause of some curious observations among the superstitious. While the Queen and the King of the French were waiting in the superintendent's offices, the rain far from abating, increased in violence, and this, together with the tempest of wind that arose at the same time, compelled the company admitted into the Victualling-yard to fly precipitately to any place they could find shelter.

Colonel Bouverie's mission to London included an intimation to such of the Ministers as might be there of the expected arrival of the King of the French, in order that some one might be at the station to receive him. General Wemyss was deputed to attend the King to Dover, and to see him on board the packet.

The royal party took dinner, as already mentioned, in Mr. Grant's house, which, as may be supposed, was completely crowded with gentlemen and ladies, and with the officers of the King's suite. Notwithstanding the extreme inconvenience to which they were all put, it was satisfactory to hear every now and then a hearty laugh amongst the party, especially from the room where the illustrious travellers themselves were. The royal party remained nearly three hours at Mr. Grant's until the hour at which the special train was ordered.

At a quarter past seven, the King of the French and the Duke de Montpensier took leave of the Queen and the Prince, and proceeded, accompanied by M. Guizot, Count de St. Aulaire, and all of his suite who had not gone on board the steamer, to the station. His Majesty arrived there at half-past seven o'clock, and was saluted with hearty cheers by those who were assembled to witness the departure. His Majesty acknowledged the compliment, and entered the carriage followed by all the chief members of the suite, so that the royal carriage was nearly filled. General Wemyss accompanied his Majesty.

The train started at a quarter to eight o'clock, and reached the Nine Elms station at thirty-five minutes past ten o'clock.

At Nine Elms, Sir John Easthope, Mr. Chaplin, Mr. Boothby, and some others of the Directors, were in waiting to receive the King.

Sir James Graham was also in waiting at the station, and as soon as

the train stopped, the right honourable baronet entered the carriage where the King was, and conducting him out, handed him to a carriage with servants in the royal livery and outriders, which was in waiting to receive him. Sir James Graham rode in the carriage with the King, as did also the Duke De Montpensier. The rest of his Majesty's suite followed in other carriages, and the party drove off immediately to the Dover Railway.

Arrival at the South-Eastern Railway, and Conflagration there.

In consequence of the notice sent to the Directors of the South-Eastern Railway that a special train would be required at the New-cross station to convey the King of the French to Dover, preparations were immediately commenced to receive his Majesty in a suitable manner. The platform and entrance were covered with crimson cloth, and an awning was in the act of being placed over the platform, when an alarm was given that the octagonal building, the upper part of which was used as a painter's shop, and the lower part as a depôt for locomotive engines under repair, was on fire. Several gentlemen connected with the railway were on the spot, and gave every assistance possible, but the flames were resistless, and about 11 o'clock, when his Majesty, escorted by a troop of the Life Guards, drove into the station, the whole of that noble building was in flames. Thousands had crowded from all parts on the flames being seen bursting through the lantern at the top of the building, and the arrival of his Majesty and suite shortly after, created the greatest interest. Every effort, notwithstanding the fire, was made to prepare the special train with the least possible delay, and at about a quarter past 11 o'clock, his Majesty and suite entered the carriages provided for their reception, and the special train, under the direction of Captain Charlwood and Mr. Cubitt, who took the management of the engine, left the station. As it was impossible in the midst of the confusion created by the fire, to place his Majesty's carriages upon the trucks without considerable delay, a second special train was immediately ordered to be prepared for the conveyance of those of his Majesty's attendants who were unable to depart in the first special train. Mr. Whitehead, the secretary, had arrived just after his Majesty's departure, and upon him the duty devolved of directing the necessary arrangements and expediting the departure of the second special train, and it was not till a quarter-past one o'clock that it started from the station. One of the gentlemen connected with the London and Dover Railway, expressed his regret that the late hour at which the notice for the special train had arrived, rendered it impossible for the directors to be in attendance to receive his Majesty. The King in reply, expressed himself perfectly satisfied with the arrangements, and expressed in strong terms his regret at the unfortunate fire then raging on the premises, and concluded by hoping that the company were well insured.

The Royal Yacht in Portsmouth Harbour.

After the departure of the French monarch, and the dinner at Mr Grant's as already detailed, her Majesty, Prince Albert, and the royal family crossed the harbour, notwithstanding the heavy sea which was running, and entered the royal yacht, where they remained for the night. Thus ended one of the most memorable days of which Portsmouth ever

witnessed the dawn. Every one, however drenched, seemed to be consoled with the idea that all would be repeated on the following morning.

The tide rose to an extraordinary height about one o'clock. The cellars of most of the houses near the sea were inundated for several feet with the spring tide which bubbled up through the stones and boards. The soldiers forming the guard of honor, had to wade knee deep down Point-street to the Floating-bridge. On their return, the poor fellow seemed wet to the skin, having stood all the afternoon in the deluge above and below.

On Tuesday morning, Portsmouth was again a scene of animation; about seven o'clock, every one began to bustle about, and rush to the ramparts in the endeavour to gratify the loyal curiosity which they had been deprived of by the unmerciful state of the elements the preceding day. The guns upon the platform battery were charged with a royal salute, and the bells of St. Thomas's Church rung out merry peals for some hours. The French squadron did not leave Spithead in consequence of the wind and weather. They therefore gave to the breeze their gayest ensigns, and displayed every symptom of cordial gratification at the opportunity they would have of saluting Britain's Queen.

On board the royal yacht in the harbour, the preceding evening, all ceremony was dispensed with, and her Majesty and the Prince Consort retired to rest at an early hour.

On Tuesday morning early, the brigs got under weigh, and took up positions forming a sort of cordon round the head of the Spit Sand, in a line with her Majesty's route to Cowes, the large ships and the French ships remaining as on the previous day. At seven the French steamer *Caiman* got under weigh, and joined by the *Gomer* and *Pluton*, likewise anchored off the Spit Buoy.

The *Volcano* and *Comet* steamers went out of harbour and continued under weigh at Spithead.

At half-past seven the Board of Admiralty went off from the Port Admiral's house to the *Victoria and Albert*, lying in the stream with her steam up, to pay their respects to the Queen and Prince Albert, and they remained on board; the royal standard flying at the main, and the Admiralty flag flying at the foremast head.

At about eight o'clock, the royal yacht got under weigh, and the *Victory* announced, by a salute of twenty-one guns, followed by the *Excellent*, that the royal yacht was about leaving her moorings. The harbour at this time presented the gayest imaginable spectacle, as every ship was gaily dressed out in every colour she could hoist, which together with the manning the yards and the roar of the guns, proclaimed that Queen Victoria was about to leave the harbour for her marine residence, Osborne House.

Several of the yachts belonging to the royal yacht squadron followed the *Victoria and Albert* out of the harbour, led by their gallant commodore, the Earl of Yarborough, in his beautitul craft the *Kestrel*, dressed in the gayest colours, closely followed by the French King's sailing yacht, *La Reine Amelie*, of eight guns. She is a most beautiful craft, and drew universal attention from those well versed in naval architecture. We regret to record a dreadful accident which happened on board of her whilst saluting on the arrival of her illustrious owner

and her Majesty Queen Victoria on Monday. As one of the seamen was ramming home, the gun, very inexplicably discharged itself, and blew off the hand of the seaman thus engaged. He was immediately taken on board the *Victory*, where the best surgical aid was at hand, and amputation below the elbow skilfully performed, after which he returned to his own ship.

The *Vulcan* steam-sloop and the *Eclair* were the only government vessels which followed her Majesty's yacht on leaving Spithead.

At ten minutes past eight the royal yacht passed the Platform Battery, saluted, (the dreadful accident of Monday on the King's Bastion, having deterred the use of those guns for saluting,) as the yacht passed. The royal standard was hoisted on all the points before-mentioned, and the walls were again thronged with spectators. Her Majesty was not visible on the deck of the yacht, or in the pavillion erected thereon, but the Lords of the Admiralty, in their full uniforms and various ribbons and orders, were most conspicuous on the quarter deck of the noble vessel. As the royal yacht approached Spithead, the yards of all the ships were manned, and various colours displayed from every point from the masthead down to the water's edge. The *Inflexible* and *Belle Poule* then commenced firing broadsides of twenty-one rounds each.* The firing excited great astonishment among the British officers.

* We can hardly imagine a more magnificent sight than was seen at Spithead, when our Queen passed through the English and French squadrons on her voyage from Portsmouth to Osborne House.

Three magnificent three-deckers, *St. Vincent*, *Caledonia*, *and Queen*, exhibited that yacht-like symmetry and neatness which no nation except our own seems to attain or even aim at, as combined with qualities more warlike, and in picturesque contrast with these, the noble *Inflexible*, of 90 guns, and the *Belle Poule* frigate, of 60 guns, exhibited favourable specimens of that peculiar frowning and fighting, yet showy character, which is attained in great perfection by our gallant French neighbours.

It was, in truth, to the French ships of war that the scene on that occasion owed its peculiar splendour; and especially to their manner of saluting, which threw our own proceedings in that line altogether into the shade.

Disdaining the usual practice of popping off one gun at a time, singly, the Frenchmen fired whole broadsides, that is, one whole side of one deck, then the opposite side, then the deck next above, and then *da capo* from below, at the interval usual between single guns.

It must be remembered that owing to the French system of arming the whole of the spar-deck, or having the ship "double-banked," as it is called, the effect of these broadsides was quite complete; the *Inflexible*, a two decker having *three*, and the *Belle Poule*, *two* entire tiers of guns. It is to this peculiarity that we wish to direct the attention of nautical persons: and we are glad that an opportunity has occurred for our highest naval authorities to make some kind of comparison between this plan and our own. We are not advocates for "double-banking," we know that the question is one concerning which men practically wiser than ourselves are not agreed; we presume to offer no decided opinion; we only venture to call attention to one or two points connected with the matter.

Of course the number of guns is increased; this may or may not be considered an advantage, though in the *early* part, at least, of an action, we should think there could be little doubt as to the advantage of this, and this increase of force does not affect the "quarters," or space between the guns, (indeed, the adoption of the foreign way would affect it favourably as to the quarter-deck guns of line of battles and first class frigates,) since it consists only in occupying what is, among us, an empty space.

The disposition of the weight is altogether in favour of double banking;" our present plan loads the extremities of the upper deck with heavy guns—the foreign plan

The French ships fired first their main-deck starboard side guns, and then the spar-deck larboard side, fore and aft; and then reversed the order, and fired the main-deck larboard side, and spar-deck starboard side, and this with a rapidity totally unexpected. The *Victoria and Albert* was steered at about twenty minutes past eight alongside the *Gomer*, when her Majesty went on board that steamer, as reported to breakfast. The royal standard was removed thereupon from the *Victoria and Albert*, and hoisted on board the *Gomer*, when another salute in broadsides acknowledged the honour. Her Majesty was received on the quarter-deck by Vice-Admiral La Susse, who conducted her Majesty and her illustrious consort to the state apartments, occupied by his Majesty Louis Philippe.

Her Majesty, during her progress through these magnificent apartments, repeatedly expressed herself to the French admiral as delighted n the highest degree with the admirable tact displayed in their arrangement, with the splendour of the *tout ensemble*, and the exquisite taste which prevaded the details as well the largest as those of the minutest description. Her Majesty did not confine her visit to the state apartments and those of the officers, for returning to the deck, she went right "forward," and appeared to feel scarcely less interest in ininspecting the part of the vessel occupied by the seamen. Her Majesty also stood some time at one end of the vessel, and examined with much interest its capacious deck and the extreme cleanliness and order which prevailed upon it. Her Majesty, leaning on the arm of the French admiral, with Prince Albert and suite, paced up and down the deck for some time, while the band played our National Anthem and several of their own favourite tunes, and then descended to the state cabin, where a *déjeûner á la fourchette* was provided for her by the French admiral, which, it is needless to say, was of the most *recherché* description. Her Majesty sat at the head of the table, supported on her right by Prince Albert, and on the left by the French Admiral. The four senior captains of the French squadron—namely, Commander Laurenciere, chef d'etat major, Captain Graeb, of the *Inflexible;* Captain Hernoux, of the *Belle Poule;* and Commander Goubin, of the *Gomer*. The Duc d'Harcourt, who came over on board *La Reine Amelie*, which is commanded by his son, and also Lady Gainsborough and the officers in her Majesty's suite, were likewise honoured by an invitation to partake of the *déjeûner* with her Majesty. On rising to leave the table, her Majesty, speaking in French, proposed "The Health of the King Louis Philippe" which was drank, the toast being previously acknowledged by a profound inclination of the head by all present. Shortly afterwards her Majesty ordered her barge, and the same honours being rendered to her on the deck and aloft as upon her arrival,

distributes carronades of large calibre, equally, over all its length, as in a flush decked ship. The irregular and unsymmetrical distribution of the quarter deck ports which tradition still sanctions among us, is given up by every body else; and the ports of the upper deck are equally spaced and placed alternately with those of the main; so that in appearance there is no sort of comparison. It may be added, that in the case of French "third class frigates," which are not double banked, this regular arrangement of the quarter-deck and forecastle ports adhered to, greatly to the furtherance of symmetry, and not to the detriment of convenience or efficiency, that we ever heard.

descended to it, accompanied to the bottom of the ladder by the French Admiral.

While her Majesty was on board the weather had become very squally, and the English royal yacht was driven or had stood out some distance from the *Gomer*, and was now lying beside the French sailing yacht *La Reine Amelie*, commanded by Count d'Harcourt, which had just before been towed out of harbour by the *Echo* steamer. Her Majesty, however, sat in the barge while it was being tossed about by a heavy sea with the most perfect composure, and on arriving alongside her own vessel, ran up the ladder as carelessly as if it were the grand staircase at Windsor. Soon afterwards an incident occurred on board the English royal yacht, which afforded much amusement.

At the *déjeûner* on board the *Gomer* her Majesty had much admired some splendid cakes which had been made for the banquet, which the officers of that vessel hoped her Majesty, with the King of the French, would have partaken of on Monday. The French Admiral had thereupon requested her Majesty to accept some of them, which her Majesty did very graciously. Accordingly, as soon as her Majesty returned to her own yacht the coxswain of the *Pluton* was entrusted to convey the presents on board the *Victoria and Albert*, and when he arrived on deck, her Majesty happened to be standing there alone, her dress being a plain black gown, bonnet, and shawl or wrapper. The coxswain not having, it is presumed, the least conception that the plainly-dressed and unattended person before him was the Queen of England, was seen to walk directly up to her Majesty and holding out his arms laden with the cakes, to request her (his words could not have said it more plainly than his actions did) to take charge of them. Her Majesty was seen to laugh at the man's mistake, and Prince Albert who came up immediately after, also joined in the laugh very heartily, after which his Royal Highness kindly directed the man where to go with his burden.

On leaving the *Gomer* her Majesty's yacht did not, as was anticipated, steam round the island, but cut across direct for Cowes. As she approached the fleet at Spithead the French ships fired broadsides as salutes, and with an alacrity and smartness almost incredible after the reports of their bad gunners. In fact, the subject of the French gun practice has become one of great interest, and whether derived from custom, or specially arranged by way of refutation of the *Warspite's* criticism, it had a very grand and pleasing effect.

Her Majesty, while passing the French vessels, was saluted with shouts of "*Vive la Reine!*" and remained on the larboard side of the deck, and gracefully bowed in return to the salutations of the French officers and seamen. It is said the officers of the French squadron were highly gratified by her Majesty's visit to the *Gomer*, and especially admired her courageous bearing in the barge, the weather being very rough, and the sea running very high. Her Majesty was not long in gaining Cowes.

Arrival of her Majesty at Osborne House.

Every preparation was made on Monday last for the reception of the royal visitors at Osborne House. In the evening one of H.M. steamers

arrived in the Roads, and landed the royal carriages, which remained at the Medina Hotel in readiness for her Majesty's arrival. In the full expectation of her arrival that evening, dinner had been prepared for her Majesty and suite at Osborne. The inhabitants, notwithstanding the inclemency of the weather, were "on the look out," and many of the houses were illuminated. The R.Y.C. House, at East Cowes had an imposing effect from the harbour, being illuminated with the letters V. and A. in variegated lamps, and in front of the Club-room the words "Victoria, Albert," were tastefully decorated with various coloured dahlias.

On Tuesday the gale had somewhat abated, but the rain, at intervals, came down freely, but this did not damp the ardour of the inhabitants, many of whom proceeded to the high grounds of Norris to ascertain whether her Majesty was approaching. From the summit of the tower in East Cowes Park, the royal yacht was seen to leave Portsmouth harbour for Spithead, and after sojourning among the fleet of the numerous men-of-war at Spithead, was discerned wending her way towards Cowes, unaccompanied by any of the men-of-war.

Shortly after ten o'clock, the booming of the castle guns announced that the royal standard was in sight; the roar of its artillery was quickly followed by the salutes from the R.Y.S. battery, and the various private batteries along both shores of the Medina. In a few minutes afterwards, the royal yacht, bearing the standard at the main, and the Admiralty flag at the fore, came to anchor in the Roads, followed shortly afterwards by several of the R.Y.S. yachts, which had previously proceeded to Portsmouth to do homage to their sovereign. Among the yachts which followed in the wake of the *Victoria and Albert*, came the noble commodore's *Kestrel*, the *Xarifa*, belonging to the Earl of Wilton; the *Flirt*, Sir Bellingham Graham, Bart., the *Turquoise*, &c. all of which saluted her Majesty on their bringing up. At this time, the south-western steamer the *Wonder*, came from the eastward, having the French flag at the fore, and decorated with other colors, which on passing the royal yacht, were immediately lowered for a short time, and afterwards re-hoisted.

At eleven o'clock the rain ceased for awhile and the sun, which had previously been obscured by heavy clouds, now burst forth with splendour; the royal barge was then lowered and immediately manned, and in a few minutes after the royal standard was also lowered from the yacht and hoisted in the barge. Her Majesty and Prince Albert having embarked with their suite, the barge left the yacht and was rowed towards the harbour, followed by the tide-surveyor of the customs at this port, in his boat, with the customs' flag flying aft. As the royal visitors proceeded along the harbour, they were again saluted from the several batteries and yachts, and the shipping and harbour decorated with flags.

At a quarter-past eleven o'clock the royal barge reached the landing place at East Cowes, fronting the R.Y.S. Club House, which latter was tastefully decorated with dahlias, &c.

Owing to the numerous boats which by this time had accumualted in front of the stairs, it was with difficulty that the royal barge could approach the landing, and her Majesty, the Prince and her suite were

prevented from at once stepping out, and were obliged to walk along the thwarts of the barge between the crew.

Her Majesty was assisted to her carriage by Admiral Sir Graham Hammond, G.C.B., along the carpeted way laid down for her reception. Her Majesty and the Prince looked remarkably well, considering the weather and the fatigue they must have undergone. They were both dressed in deep black. Her Majesty was the first to enter the carriage, followed by the Prince and the lady in waiting; in the next carriage was part of the suite, who followed the royal carriage in quick succession, and shortly afterward another carriage succeeded with some of her Majesty's servants and baggage, and drove towards Osborne amid the deafening shouts of her subjects, whose loyalty we rather think exceeded their good breeding; particularly in their eagerness to catch a glimpse of "Majesty," they approached much nearer than could have been agreeable to the royal visiters, and much to the annoyance of those whom the public wished to honour. Unfortunately there was no one in authority present to keep the approach to the landing place clear of the boats save the coast guard and the police, who were on shore, more bent on witnessing the spectacle than duty should have dictated to them.

On a future occasion we hope to see the coast guard in their boats, which, had they been on the present, there would have been no reason for comment. By some it was expected that the mayor and corporation of Newport would have been present to assert their claim, as well as to present a dutiful and loyal address, similar to that at Portsmouth, to her Majesty on her landing in their ancient borough; but they came not, although they have asserted their right to that part of East Cowes on which her Majesty landed; even both shores of the Medina, Cowes Roads, and the Bramble being within the jurisdiction of the borough; their absence caused much regret, and tended not a little to lessen the gorgeous spectacle which would otherwise have been deserving of record.

Soon after the landing of her Majesty and her illustrious consort, the Lords of the Admiralty returned to Portsmouth in the *Lightning* steamer, with the Admiralty flag at the main, and were saluted with an official salute as they passed the platform battery. In the afternoon the weather was very boisterous, and little better than the preceding day; the wind blew nearly a gale all day, and towards evening was accompanied with heavy showers of rain, so very heavy they would have drenched a person to the skin in a few minutes. About four o'clock all the colours vanished from the masts and yards of the ships, and at sunset they sent down top-gallant-masts, and made all snug for the night.

Departure of the King of the French from Dover.

Colonel Bouverie having left Portsmouth for Dover by a special train, as already stated, for the purpose of making the necessary arrangements, arrived at the Ship Hotel in Dover, and ordered apartments to be prepared for his Majesty and suite. It may be readily imagined that such an intimation created the greatest bustle of preparation, most of the inmates of the hotel having retired to rest. His Majesty, accompanied by his suite, arrived at Dover at half-past two o'clock in the morning,

and was received by Colonel Jones, the Commandant of the garrison, and Captain Mercer, the head of the naval department of the port. A royal salute, fired from the battery at sunrise on Tuesday, aroused the mayor and corporation, as well as the inhabitants, and after a hasty toilet, the council and the mayor assembled at the Court-hall, and drew up and agreed to an address to be presented to his Majesty at his hotel.

They then proceeded to the Ship Hotel, where the mayor read, and afterwards presented to his Majesty the address from the Corporation. His Majesty, in as deliberate and impressive a manner, spoke the following reply to this address:—

Mr. Mayor, Aldermen, and Burgesses of the ancient city of Dover,—I leave this country with my heart impressed with feelings of the warmest nature, but particularly as regards the general greeting and gratification which has been extended to me by all classes of her Majesty's subjects, and the many tokens of friendship and affection which I have received at the hands of her Majesty. They gave me a favourable opportunity of manifesting towards England those sentiments of friendship and union which have ever been uppermost in my heart, and I am most happy to find those sentiments congenial with the feelings of the British nation, and I have no doubt but they will be appreciated in my country. Two such nations, mutually calculated to be of such advantage to each other, will, I trust, equally appreciate those feelings which I have so deeply at heart—sentiments which I have ever so deeply felt.

His Majesty then bowed to the mayor and the local authorities, and left the hotel to embark. It was raining hard at the time, and the wind was blowing in heavy gusts. The piers were, however, densely crowded, and His Majesty was enthusiastically cheered as he proceeded to embark on board the French steamer *Le Nord*. Having embarked, he immediately ascended the poop, and repeatedly bowed to the cordial and enthusiastic farewells which he received. *Le Nord*, on steaming out of the harbour, was accompanied by the *Oriel*, Captain Mudge, and *Swallow*, Captain Sherlock, of her Majesty's service, as an escort to the offing, when these steamers returned. Shortly afterwards the *Princess Alice*, containing the servants' baggage, followed in the wake of *Le Nord* to Calais, and the crowd then dispersed to talk over this very unexpected visit. The sea was very rough, with a heavy swell in the channel, and the royal and distinguished visiters must have had an unpleasant passage back to the shores of France.

The King arrived at Calais, at five minutes past two, where he was received by a salute from the fort. His Majesty arrived at Bernay on Tuesday evening at a quarter-past ten o'clock, *en route* from Calais to the Chateau d'Eu. An estafette had preceded him, and ordered dinner for the King and suite, sixteen in number, to be ready at seven o'clock. His Majesty looked well, and did not appear fatigued by the rapidity of his movements. The Queen had been waiting his arrival at Treport, when the entrance of the *Elau* steamer, communicated, at ten o'clock on Tuesday morning, the intelligence of the alteration in his Majesty's route.

The River Dee Lighthouse.

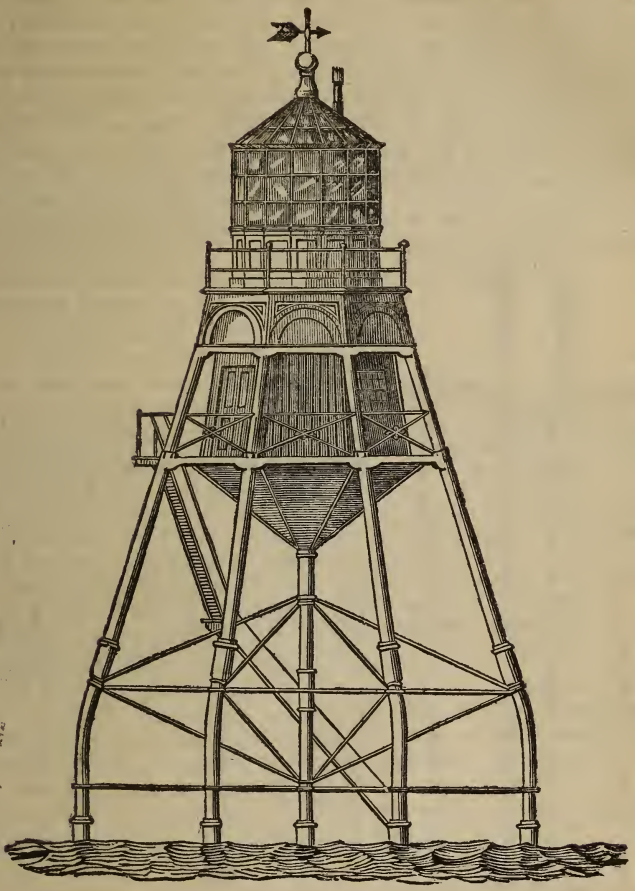


Fig. 1.

We are glad that the ingenious inventions for constructing lighthouses on sands, which we were among the first to recognize, may now be considered as fully established in the catalogue of engineering resources. It is by such applications of science to the useful arts that engineering acquires and extends the strong hold, which it is evidently taking on the public mind, and the importance which is being communicated to its professors. We are, fortunately, a very practical people, and nothing can be more welcome than those exertions of ability conformable to our disposition, while it need scarcely be said that he who invents a new machine adds to the power and wealth of our common country. Thus, in the instance before us, property is to be secured, life preserved, and commerce extended by the improvement of our harbours, and by the detection and prevention of marine risks.

The construction of lighthouses on sandbanks is a modern invention, and has already been successfully adopted, as shewn by drawings in our Journal, at Fleetwood, and the Maplin Sands in the Thames. Both these constructions were erected by the aid of Mitchell's Patent Screw Piles, to form the foundation. We have now to record another lighthouse erected under the direction of Messrs. Walker and Burgess, for the Corporation of the Trinity House, at the point of Air, in the county of Flint, at the mouth of the River Dee, a short account of which was given in the Journal for last May, page 208; the foundations are upon a different plan to those before erected, as instead of screw piles, cylinders were sunk in the sands to form the foundations, as we shall proceed to explain.

Fig. 2.
Section of Cylinder and Pillar.

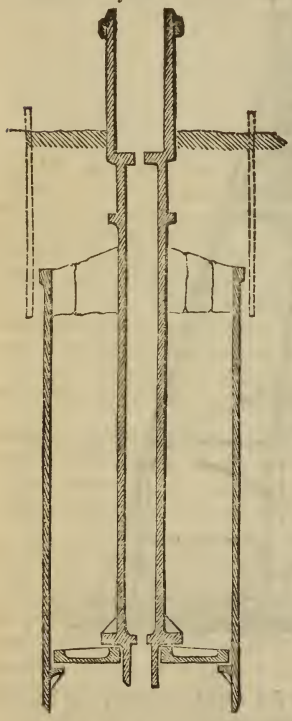
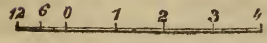


Fig. 3.



At low water the sands are dry, when the workmen were enabled to proceed in their operations, by first sinking a slight cylinder of plate iron 4ft. 6in. diameter through the sands to the depth of 4ft.; within this cylinder another cylinder of cast iron 3ft. 9in. diameter, and 9ft. long was gradually lowered through the sands by excavating the sand from the inside by the aid of an instrument well known to well-sinkers, called "A Miser;" great precaution was taken to keep the cylinder perfectly perpendicular as it was lowered: within a few inches of the bottom of the cylinder a cast iron flange, 3 inches wide, is cast upon the inside for the purpose of receiving the cast iron disc shewn in fig. 3.

When the cylinder was sunk to the depth of 12 feet, a hollow cast iron pillar 13 feet high and 1 foot external diameter below, was set in the centre of the cylinder, the foot resting upon the disc at the bottom, as shewn in fig. 2; when the pillar was placed in its proper position the surrounding space was filled in with concrete, and on the top were laid large stones about a foot thick, the whole forming an immoveable foundation of 10 tons in weight. There were nine of these cylinders, eight at the angles and one in the centre, sunk through the sand, making together a total weight of 90 tons to receive the lighthouse, On the top of the pillars are cast sockets for the purpose of receiving the bent or curved pillars, as shown in fig, 1, and which were also cast hollow with sockets to receive the inclined pillars upon which

the building was erected. The piles are firmly tied together by two horizontal ties all round the eight sides, and again by diagonal ties from the centre post to each of the angular posts. The upper part of the edifice is enclosed with Palmer's patent corrugated iron plates, with a space on the inside, and lining boards, which form a living room for the attendants; and the conical part below a small kitchen and water closet. The lanthorn above is constructed of gun metal in a very superior manner. The whole of the iron work was prepared by Messrs. Gordon and Co., engineers of Deptford, under the immediate direction and superintendence of Messrs. Walker and Burgess.

During the construction of the lighthouse, and since it has been finished, it has been exposed to some severe gales, which it has withstood with remarkable firmness.—*Civil Engineers' Journal.*

Improvement of Harwich.

H.M.S. "Blazer," Harwich, 24th February, 1844.

Sir.—I rejoice most sincerely to hear that there is at last some prospect of justice being done to Harwich in return for the great injustice that this harbour has suffered at the hands of Government during the last five-and-twenty years or more; but, as I have already twice officially reported on this subject to their Lordships, in November, 1842, and January, 1843, I need now say no more about it, but reply at once to your letter.

The object to be considered in improving Harwich Harbour, as it appears to me, is simply to restore it as nearly as possible to the state in which it was left by nature. In order to effect this the steps would be threefold:—

1st. To put an immediate stop to the quarrying up and carrying away the cement stone from the foot of Beacon Cliff.

2nd. To replace by an economical breakwater of rough stone, run out from Beacon Cliff, the natural barrier that has been taken away, so as to confine and guide the ebb tide against Landguard Point, and thus stop its increase.

3rd. To dredge a 15 feet channel (or if preferred an 18 feet channel) in lieu of the former deep water passage now lost.

In the accompanying plan of the harbour are marked the proposed line of breakwater, and the shoals to be dredged away, on both of which points I beg to submit a few words of explanation.

And first, as to the breakwater. From your personal acquaintance with Harwich Harbour, and with the set of the tides, you will at once perceive that the object in running it out in an east-south-east direction from the foot of Beacon Cliff is to deflect the ebb stream that flows past the east face of the town towards the main stream of the tide, which runs down the Suffolk shore, and cause them to set in their united strength against Landguard Point, not with the hope of cutting it away, but to check its further increase, which, as shown by the plan, has been about 500 yards during the last 40 years, and 70 yards since our survey of the port in 1841.

Had the removal of the natural barrier at Beacon Cliff been the sole cause of the extension of Landguard Point, it would have been sufficient to have restored that barrier only as far as low-water mark, but the dredging away of Felixstow Ledge likewise of cement stone, about three miles to the north-eastward of the Point, has also materially aided its increase, and as that cause of damage seems beyond our reach, I proposed to extend the breakwater about two cables' length further out in order to join the Cliff Foot rocks, which form an excellent natural prolongation to it, thereby narrowing the outlet of the main body of the tide to

a width of less than 800 yards, and causing it to set with much increase strength against Landguard Beach Point.

Secondly, I should propose that the portion of the shoals tinted red on the plan, should be dredged away, as before stated, so as to give a general depth of 15 feet at low-water, throughout a channel a quarter of a mile wide along the whole length of the Suffolk shore, thereby substituting a passage for that which has been lost; and enabling large steamers at all times of tide, frigates at a quarter flood, and the largest ships of the North Sea fleet at high-water, to enter the harbour by night as well as by day.

	Cubic yards.
To accomplish this it would be necessary to remove from the Glutton End about	20,000
From the Altar Flat about	65,000
From the Altar Bank and detached knolls, &c. . . .	45,000
This at an average one yard in depth would give a total of cubic yards	130,000
	or, 150,000 tons.

The soil to be removed, there is little doubt, is like the rest of the ground hereabouts, namely, blue or London clay (locally called platimore), with layers of *septaria* or cement stone; each ton of the latter is worth 5*s.*, so that it is quite possible that the dredging of the shoals might eventually pay a fourth part of its own expense.

I have this day consulted the owners and masters of the dredging vessels, and they are willing and anxious to enter upon the work; but being chiefly poor men, and dependent upon their earnings for their daily bread, they do not like to risk the chance of what they may find on these shoals, and therefore could not undertake the work at the bounty of 1*s.* per ton, as I proposed; but they have offered to go to work for two or three weeks to see what the shoals are really composed of, giving up two-fifths of their profits, that is, at the rate of 3*s.* per ton* for all they get. If then their Lordships would be pleased to sanction an expenditure of 100*l.* upon a trial for a month for five dredging-smacks, in which time we ought to remove upwards of 500 tons or cubic yards of soil, we should be in a much better position to give an estimate of the probable expense of the undertaking with our local means; at all events we feel pretty certain that a contractor would engage to dredge it away with a dredging machine at the rate of from 1*s.* to 1*s.* 6*d.* a ton, or at a total cost of from 7000*l.* to 10,000*l.*

The proposed breakwater would be 800 yards long by five yards mean width, and five yards mean depth, thus making 20,000 yards for its cubic contents. This, if roughly built of Kentish rag, the cheapest stone there is, would not exceed 10,000*l.*; but perhaps, if a frame or outline of it were constructed of stone, iron, or other stiff materials, a great portion of the soil dredged up from the shoals might be thrown into it, and thus the expense might be considerably diminished; a contractor or engineer, however, could give a better estimate of this expense.

There is one other point, and that of some importance, to which I wish to draw your attention; namely, the exposed state of the Government property on the north face of the town. The old ships placed there as breakwaters (omitting for a moment the disgrace to the country of such a clumsy make-shift after five and twenty years of peace) are fast going to decay; they must soon drop to pieces, and then the first W.N.W. gale and high spring-tide may ruin the

* The Admiralty have since granted 100*l.* for this purpose; besides which the corporation of the borough of Harwich have liberally expended a similar sum, with which 520 tons of soil were dredged up, 70 tons of this were of cement stone, worth 5*s.* a ton.

whole. Now, as it is generally understood that the proprietors of the Eastern Counties Railroad have pledged themselves to give 30,000*l.* in order to carry out a pier at this point, on the plan proposed by Mr. Rendel, C.E., and approved of by the Admiralty, would it not be a measure of prudence, and far more economical in the end, at once to close with this offer, and in addition to grant a little Government aid to complete the breakwater, which, combined with the railroad pier, would effectually guard this part of the town, would afford shelter to the revenue cruisers, or to vessels obliged to run for the port from loss of anchors or having sprung a leak, and entirely protect the Government property from the destruction which daily threatens it.

I submit this with great deference to your very favourable consideration.

All circumstances then considered, I am of opinion that the sum of 7000*l.* a-year, judiciously laid out for three or four years as the case may be, would effectually preserve this port, which must always be the best point for protecting our North Sea trade, and restore Harwich Harbour to its former boast of being the only real harbour of refuge on the east coast of England between the Thames and the Humber.

I am, &c.,

JOHN WASHINGTON, *Captain.*

Captain Beaufort, R.N., *Hydrographer.*

GUNPOWDER.—The following has been posted in conspicuous places at the several docks and other rendezvous of shipping on either side of the river:—

Admiralty, Sept. 26, 1844.—Notice is hereby given, in pursuance the act of his late Majesty King George III., cap 159, sec. 6, that it has been deemed necessary and expedient, that from and after the 10th day of October, 1844, no private ship of war, transport, or other private or merchant ship or vessel, shall receive or be laden with or have on board thereof any quantity or quantities of gunpowder exceeding five pounds weight in the whole, in any place or places in the river Thames above Barking-reach.

By order of the Lords Commissioners of the Admiralty,

J. BARROW.

NEW REEF.—A dangerous reef was discovered by Captain Tabor, commanding the Maria Theresa, on the 16th November last, in lat. 37° S., long. 151° 13′ W. Captain T. does not find it laid down on any charts which he has fallen in with since the discovery.—*Sydney Herald.*

THE SAFETY BEACON ON THE GOODWIN SANDS.—Extract of a letter:—"Captain Bullock has just completed the replacement of his safety beacon on the Goodwin Sands, which was run down by a careless Dutchman some weeks ago. It now stands erect on those dangerous sands, the record of a simple design, which has led to attempts of a similar humane and praiseworthy character, but of a more elaborate and costly description. It is affixed upon the same principle as at first, with an improvement in its base. This is now composed of iron instead of wood; and it consequently penetrates further into the sand than the former. From the stability of the materials of which it is composed, there is no doubt, 'barring accidents' of a similar nature to the last, it will last for years. A proof thus far has been obtained that beacons of refuge may now be placed upon any sand.

"The honour of having led the way to these useful undertakings (even after this simple contrivance shall have been eclipsed, by the substitution of beacons of a more durable description) is due to Captain Bullock. There is no doubt

that the first beacon of refuge has been the happy means of saving both life and property, answering the double purpose of a warning and a refuge. It has cautioned the unwary of the proximity to danger, and has been a guide even to those who were aware of its erection in the constant communication between Dover and Ostend.

"During my visits to the Goodwins, while the beacon was in the course of re-erection, my attention was particularly drawn to the fact, that the foundation of the former beacon remained unmoved and unabsorbed. Day after day I walked upon the mass of chalk deposited by Captain Bullock, now four years ago. In consequence of this circumstance I perceived that Captain Bullock has resorted to his former plan by throwing upon the same foundation between 50 and 60 tons of concrete blocks, chalk, and shingle, all of which have stood unchanged during the continuance of the late calm weather. The tide so strong as it passes the shallow, has had no visible effect upon the mass, around which the sand has accumulated nearly two feet in height, and it now remains as the result of a most interesting and successful experiment.

"The present gale (while I am writting) from the southward will prove whether it will eventually stand against the 'boiling surf' by which it will be surrounded and assailed. I have myself very little fear for the heavy concrete blocks which constitute the base of the cone; but I think it very likely that the upper portions of the undefended and loose shingle may be disarranged and the cone somewhat flattened down. It is, however, but an experiment, and the problem will probably be demonstrated that human skill and ingenuity cannot overcome the formidable Goodwins with small means, and that man cannot successfully wage 'a little war' with such a foe. However, I must say, from all I have heard, that the Lords of the Admiralty have behaved in the most kind and handsome manner to Captain Bullock, in enabling him to possess thus far every facility for carrying out his humane and highly praiseworthy undertaking."—*Shipping Gazette.*

The Inclined Angle Controversy.

[We have received the accompanying letter on this subject from Lieut. Edye, R. N., relinquishing his pretensions to priority of the invention of the method of reducing the inclined angle, in surveying, to the horizontal one, given in page 391, of the June No. It is right that we should state with reference to this subject, that prevtous to the appearance of our last No., we had received from Capt. Beechey a rejoinder to Lieut. Edye's letter, addressed to him in page 512, which we preferred referring to Lieut. Edye direct. The result is the following letter, which we had much rather see than the continuance of a controversy, interesting to no one but the parties themselves. Lieut. Edye having assured us that the method alluded to was also his own invention, the whole question resolves itself into one of priority; so that whatever credit there is in it, belongs to both of these officers, although that of being the first belongs to Capt Beechey.]

Sir.—In the August No. of the N. M. you will find a letter published from myself to Captain Beechy, in support of my claim to an invention for reducing the inclined angle by diagram. Since the invention of it, circumstances have arisen to lead me to wish I had not placed it there; as I now believe that I was mistaken in advancing my claim to priority of discovery; and my request in now addressing you is virtually to cancel that letter in your forthcoming No.

A G. Edye.

To the Editor, &c.

The Wreck of the Windsor Castle.

The following particulars of this disaster, which is briefly noted in our "Maritime Extracts," are from a correspondent of the *Morning Post.*

On Tuesday, the Windsor Castle, an iron steamer, plying between Edinburgh and Dundee, left the latter town at the same hour with her Majesty's yacht, having on board about two hundred and fifty passengers, the greater part of whom had come from Edinburgh with the steamer that morning, in order to witness the embarkation of the Queen. The Windsor Castle is a small steamer, originally built for the river navigation of the Clyde; and the number of passengers that was on board completely crowded her deck. She sailed repeatedly round the royal yacht previous to starting. When the royal squadron cleared the estuary of the Tay, they stood out to sea, while the Windsor Castle, which was, as might be expected, soon left behind, stood right across the bay of St. Andrew's, for the Firth of Forth. For some time all went well; the night was fine, and the weather calm, the wind blowing gently from the north-west; and in the centre of St. Andrew's Bay, which is generally considered the roughest part of the navigation on the east coast of Scotland, the sea was so smooth that a number of the passengers commenced dancing on deck. This continued for some time, till the dancers, wearied with their exercise, desisted.

The royal squadron being now nearly out of sight, most of them went below. Matters went on in this quiet manner till about half-past seven o'clock at night, when a dark object was seen looming directly in front, and not twenty yards distant from the vessel. This was at once ascrtained to be the Can Rock Beacon—a mark of warning to point out a dangerous ledge of rocks, running from the land a considerable distance out to sea, and the extreme point of which is marked by this beacon. Instantly the word was passed to stop the engine, and then to back it; and as instantly the word was obeyed, but too late for safety, the vessel surged onwards, and struck the beacon on her larboard bow, when she reeled back and heeled on her beams, as if stunned by the blow.

One cry was unanimously made to Mr. Greig, the master of the steamer, to run her ashore. The commander loudly assured the passengers that there was no danger—that she was perfectly tight; but those who had gone below returned and assured their companions that the ship was settling fast, and the water in the hold, surging from side to side of the vessel, caused her to threaten every moment to turn on her beam ends, which we believe was only prevented by the passengers running to the one side, as the vessel hurled over on the other. Still the vessel was gradually approaching the land, which was now close at hand, and did not appear to be very inviting. Fortunately, her keel at last touched the bottom, between two of the ledges of rock, and the steam was immediately let off.

It turned out that the only boat on board—the only means that had been provided, in case of accident, to save the lives of about 250 people—was a small stern-boat, which, when now brought into action, was only capable of taking ashore six passengers at a time! Fortunately, the calmness of the night, and the settled condition of the stranded ship, had by this time restored nearly all the passengers to their senses; and when the boat was brought alongside, the cry of "the ladies first ashore," was at once attended to. One man was, however, landed and despatched to Crail, a fishing town about two miles to the south, for other boats, and in the course of about an hour, three large fishing boats were alongside, and conveyed a great number of the passengers on shore. Still there were about 50 left on board; who, after waiting for some time for the return of the boats, which was longer than was expected, resolved to reach the shore over the bows of the vessel, which was now left dry by the receding tide, so that, in one way or another, the whole of the passengers got safely to land in about an hour and a half after the vessel had struck, and about two miles from the scene of collision. The vessel continued under way, after the shock, for about twenty minutes. We understand she went to pieces next morning.

Two faults, in this wretched business were very apparent. The first was, that no look-out had been kept at all. The Can Rock Beacon is familiar to every navigator of the Fife coast, and was passed in particular by this vessel twice every day. Nothing, therefore, but gross negligence could account for

the vessel running upon an object so conspicuous in itself, and marking a rock so dreaded by mariners. In fact, the Windsor Castle had no business inside the Can Rock at all. The next fault was in having no provision for saving life on board. The boat which was produced was unworthy of the name, and would inevitably have been swamped, had it been resorted to at sea. The loss of life from the want of boats has been so dreadful in former instances, that it is surprising the public do not insist on steamers carrying something like a respectable amount of accommodation for passengers in the shape of boats; and failing the public, it is surprising that government does not interfere. It ought to be added, in conclusion, that after the accident, the conduct of Mr. Greig, the commander, who is the son of the proprietor, was distinguished for coolness and activity.

Guano.—We have received the following additional particulars which may be interesting to the shipowner and trader :—

Here I am in the father of all dunghills, an enormous mass of birds' manure, called Guano, lies 30 feet deep on the Island of Ichaboe, (pronouced Itchebo,) for an incorrect account of which, see *Nautical Magazine* for May.

Conceive a barren, desolate, sandy coast; but *so* barren, *so* desolate, *so* sandy! without a soul, or a bush, or a stream near, where it never rains, where the dew wets you through, where it is so cold one gets the horrors, where the air is so clear, that one cannot see the land till you are a mile or two off. An enormous surf beating over the shore, rocks, reefs, shoals, in all directions; conceive a barren rock of an island off this coast, to be covered to the depth of 30 feet, with a beastly smelling bottle sort of mess, looking like bad snuff mixed with rotten kittens; conceive 132 ships lying packed between this island and the aforesaid sand and surf; fancy 132 masters of merchantmen, with 132 crews, and 132 sets of labourers, all fighting; conceive a gale of wind on the top of all this, and you will then only have half an idea of the rum place I have at last got into.

J. F.

"*Ichaboe, May* 23.—The island is two miles and a half in circumference. The harbour is not safe, for, if a strong N. wind were to blow, vessels would have to put to sea. Here and there are to be found the remains of a seal decomposed, and penguin eggs are to be found quite whole, at a depth of thirty feet, which must have been deposited 3,000 or 4,000 years ago; and, if we look at it seriously, there is but one conclusion to be drawn—viz., that it is an extraordinary phenomenon of the 19th century. There are 45 vessels here."

"The guano here is from 40 to 50 feet in depth, and will take a year to remove it. There are 60 vessels here, and daily increasing in number. The anchorage is not safe at this season. Vessels require good anchors and cables here. The Esperance is riding with both anchors down and 75 fathoms of cables, and strong southerly winds. After the sea wind abates the heavy rollers set in from the N.N.W., and break all over the north entrance, but no wind with them.

"The best passage is to the south of the island. I would recommend all vessels to anchor to windward of the shipping, and then drop down: by doing so, they will be to windward in loading, which is of great importance, and they will also be clear of the rollers in the north entrance. A large quantity of gum arabic* is to be found here. I picked up in the course of an hour half a pound, about a mile from the vessel. One of the natives has been on board; he had travelled two days before reaching the bay. Vessels must make a long stay here, as they have to assist others to load for the use of pit and stage."

* This is incorrect. It has been ascertained to be olebanum, of a very superior quality.

The Artificial Horizon.

H.M.S. Firefly, Oct. 9th, 1844.

Sir.—I beg you will permit me to offer a few words in reply to a communication you have received from Mr. Bass, on the subject of my horizons.*

It is with pleasure I bear testimony to the very neat contrivance which Mr. Bass showed me in the spring of this year, for observing altitudes at sea when the natural horizon was obscured. It consisted of a tube placed at the back of the horizon glass of the sextant, similar to the horizon of Commander Becher, and was looked into by the ordinary telescope of the sextant. It seemed to contain a moveable vane that pursued its contact with the reflected image from the index glass. The motion was smooth and delicate, and I was much pleased with the instrument; and being anxious that he should succeed in rendering it as perfect as possible, I offered him suggestions which I hope may have been found useful. But, Sir, I beg to observe that I was entirely ignorant of its mechanism, and I have remained so up to the present moment; I saw only the *outside* of the tube, which seemed closed at each end with a piece of ground glass, and I purposely avoided asking a single question as to its construction, as I had already informed Mr. Bass I was engaged in contriving an instrument for the same purpose; and indeed, Mr. Bass, in his letter frankly acknowledges that the internal arrangement of his tube was neither shewn nor explained to me.†

What may be the principle followed out by Mr. Bass, I do not know *even now*, but the result seems to be the same as that which I have arrived at by an instrument, of a totally different description at all events, and if *his* depends upon the well known property of the object glass of a telescope, it at any rate forms only *one part* of the principle upon which my horizons are constructed. This principle in *its simple form* is neither more nor less than that of Captain Kater's Collimater; and from Mr. Bass's letter we may infer that his instrument is an adaptation of the Collimator to the sextant; the only difference being in the mechanism of the parts of the instruments, Mr. Bass preserving the position of the vane with respect to the horizon by means of a *pendulum* or some such contrivance, whilst Captain Kater maintained it by floating the instrument *in mercury*.‡

As to *the novelty* of the invention, the Collimater was invented as far back as 1824; its principle was explained to me by the late Captain Kater himself; and in 1825 and three following years I used it in my portable observatory abroad for observing altitudes on shore. It has since been employed with slight alteration in our best observatories. Professor Gauss employed the principle before Captain Kater, and as far back as 1785 it was used by Mr. Rittenhause.§

For some time previous to hearing of Mr. Bass, I had been engaged in adapting Mr. Dent's Dipleidescope to the sextant, and having eventually succeeded in accomplishing the motion by which the objects preserved their contact, and gain the proper altitude, I determined to try how far it was possible to construct an artificial horizon, which should be contained *within the telescope of the sextant*, and I do not hesitate to say that in succesfully carrying out this idea, although it embodies the principle of the object glass above described, I am fully entitled to the merit of *originality*, if indeed *the principle* be not *new* I have certainly considered it *as such* in my first communication to you, and it was to this I referred in p. 502 of your August number,—but I leave it to the public to judge when they see the instrument.¶

* See Nautical Magazine for Sept. p. 551. † Ibid. 552.

‡ See Philosophical Transactions for 1825, p. 72 et seq. and a plate.

§ See Transactions of American Philosophical Society vol. 2.

¶ Mr. Cary, the Optician, may remember I explained to him how the objects might be made to move together long before I had seen Mr. Bass, and his reply was when I talked to him of constructing such an instrument—"Wait till you have seen Mr. Bass's instrument."

With regard to the confidential nature of the interview I had with Mr. Bass, I can only say that I trust I stand clear of all imputation on that score. As there was nothing discovered or communicated beyond the fact of an instrument for a certain purpose being constructed, there was of course nothing to disclose.

I now beg leave to observe that in adapting the *Dipleidescope* to the sextant, I tried several descriptions of *balances* and *compensated pendulums*, which were made for me by Mr. Dent's workmen *long before* I had ever heard of Mr. Bass; and as I may perhaps give this instrument to the public, through Mr. Dent, with a compensated pendulum of some kind, I take this opportunity of giving publicity to the circumstance, for fear I may hereafter be thought to have borrowed my idea from Mr. Bass. This imaginary piracy of ideas Mr. Editor has caused more contention and lawsuits than perhaps any other subject. The fact is Sir, that when two persons are engaged in the same pursuit, and are limited to certain obvious principles for carrying out their ideas, they must necessarily tread very nearly in the same path, although in the end one may far outstep the other in neatness of construction and efficiency of contrivance.

In conclusion, Sir, I beg to say that my only object in endeavouring to improve upon the Marine Artificial Horizon, is that of rendering a service to the Navigator, and my hope is that all those engaged in a similar pursuit may be actuated by the same spirit; and, sinking all feelings of jealousy or contention, strive with each other, only, in the endeavour as to who shall most effectually contribute to the safety and convenience of the mariner.

I am Sir, &c.,

F. W. Beechey,

To the Editor, &c. *Captain R.N.*

P.S.—I take this opportunity of saying that owing to certain improvements in progress for counteracting the *throw* of the sea, my Artificial Horizons have not yet been issued by Mr. Dennis, but I am in hopes that they will now be such as will insure accuracy of position, whilst they may be used by every seaman accustomed to observing with the sextant.

The Plymouth Royal Naval Club.—This Club dined together on Monday, the 21st inst., to commemorate the battle of Navarino, in which memorable engagement the gallant Captain Superintendant of the Royal Hospital, Plymouth, Sir Thomas Fellowes, shone so conspicuously in the *Dartmouth* frigate, and afterwards brought home the despatches. The Chair was taken by Capt. C. J. Austen, R.N., and Capt. W. Luckraft filled that of Vice-President. The usual loyal and appropriate toasts were drank, and the gallant chairman, in giving "the heroes of the day," said, that although the club was then commemorating the battle of Navarino, in consequence of the 20th falling on a Sunday, they could not forget that the day was, in fact, the anniversary of the battle of Trafalgar, in which the gallant conqueror at Navarino bore a conspicuous share, and which must ever live in the recollection of the navy, together with the memorable example of that immortal chieftain who fell in the hour of victory. W. S. Harris, Esq., being one of the guests, allusion was made in giving their healths, to his important services to the Navy, by the lightning conductors, and which elicited from him several particulars relative to the benefits of the invention. Among the healths of absent and Hon. members present, those of Admiral Sir David Milne, Commodore N. Lockyer, Capt. Sir T, Fellowes, Col. Owen, and Capt. J. Toup Nicolas were given, and allusion being made with the latter to the situation of Queen Pomarè, the gallant Captain in reply, said he certainly had been placed in a very anxious position regarding that Sovereign, when at Tahiti in the *Vindictive*, and he had found it necessary to take a heavy responsibility on himself there, but he believed that if any of the Officers then present

had been in his situation, not one of them would have refused to protect an unfortunate woman. The evening was passed with all that harmony which has ever attended the Royal Naval Club.

H.M.S. Hyacinth.—On August 12th, in lat. 15° S., long. 11° 30′ E., when off Fish Bay, Mr. John F. Tottenham, Mate, was sent in a four-oared gig, with one spare hand, to communicate with the Portuguese Governor. The weather having become thick, he missed the port, and being unacquainted with the coast anchored the boat for the night.

On the following morning he pulled again to the southward, and about noon discovering a suspicious looking brig without colours slip and make sail, he gave chase. There being but little wind, and the vessel entangled with the land, he was enabled to get within musket shot of her, and fired wide of her to induce her to show her colours. This, however, was disregarded; and the officer observing them trim a port, and run a gun out, pulled into her wake. Some of the brig's crew immediately commenced firing musketry, whilst the others got the gun on the poop and pointed it at the boat. Mr. Tottenham upon this fired as fast as the spare hand could load for him, and with such coolness and precision (as was afterwards proved) that almost every bullet expended was traced to the gun carriage or its immediate vicinity. Four of the crew having been wounded, to avoid being boarded ran the brig on shore and abandoned her—to the number of 18—leaving one man behind, who soon after died of his wounds. Mr. Tottenham immediately took possession of the brig, which proved to be a fine vessel of 200 tons, and fully equiped for carrying 1000 slaves. Her decks were strewed with muskets, swords, and bayonets, a barrel of gunpowder, and a quantity of ball-cartridges, beside two 4-pounders, loaded. In the course of the afternoon she was discovered from the mast-head of the *Hyacinth*, which stood in and hove her off.

The astonishment of Captain Scott and his crew at finding so large a vessel captured by his four-oared gig may be easily conceived. Captain Scott, in a letter to one of Mr. Tottenham's relatives, says—"I cannot find terms sufficiently strong to express my admiration of Mr. Tottenham's cool and most judicious conduct throughout; in proof of which I can only assure you, that no individual has been able to suggest any improvement in the line of conduct he adopted and carried out while under fire; and it is the more gratifying to me to bear testimony to Mr. Tottenham's merits on this occasion from the good opinion he has already gained for himself by his conduct in the ship, previous to this brilliant action.

Royal Polytechnic Institution.—The gallery of the museum of this institution has recently been arranged in a very judicious manner, and great improvements made in classification of the numerous articles contained in it. Amongst the variety of novelties just sent here for public inspection, are a great number of specimens of carving in oak and other durable woods, produced by the very ingenious machine for which Mr. Samuel Pratt, of Bond Street, holds a patent. This instrument, which is worked by a steam-engine of 18 horse-power, puts into operation a number of cutting instruments or tools, by which all sorts of carving are produced in an incredibly short space of time—mullions for gothic window-frames, traceries, wreaths of flowers, heraldic bearings, &c. It also cuts in-layings for floorings or furniture, with an elegance, precision, and rapidity which is most astonishing. The specimens should be seen by all persons interested in an important and most ingenious invention. This machine is about to be employed in cutting gun-stocks for Military muskets. These can be cut at a cost which will cause considerable

saving to the Government, and with such a saving of time as will render the fulfilment of a contract the work of a few days.

Anniversary of the Battle of Trafalgar.—The Royal yacht with her Majesty, Prince Albert, and suite, came in the harbour on Monday, 21st October, about half-past 3 o'clock; the Royal barge was in attendance with the following officers of the *St. Vincent:* viz.,—Captain Rowley, Lieutenant Prevost, Mr. Tattnal, Mate. Her Majesty and Prince Albert stepped on board, but instead of proceeding direct to the Clarence-yard, the Queen directed Captain Rowley to steer to the *Victory.* (The ship was decorated as usual, with laurels on the mast-heads, it being the anniversary of the battle of Trafalgar.) On arriving on board, the Royal Standard was hoisted, and Captain Rowley conducted the Queen to the quarter-deck and pointed out the place on which Lord Nelson fell when wounded in the battle. Her Majesty was then taken to the lower-deck, and afterwards to the cockpit and into the cabin in which Lord Nelson expired. This visit was Her Majesty's spontaneous act of kind feeling, and entirely unexpected, as the Board of Admiralty and all the Admirals, Captains, and Commanders, were assembled at the Jetty of the Victualling-yard. The Queen and suite landed about four o'clock, and left the terminus in the State carriage provided by the Railway Company.

Dreadful Shipwreck of Three East Indiamen, and Loss of Life.—Melancholy accounts have been recently received at Lloyd's, of the dreadful shipwrecks of the Candahar, an Indiaman, 642 tons burthen; the Royal Admiral, a Barque, 414 tons burthen; the Columbia, a Schooner, 180 tons burthen, laden with treasures and jewels; the Amelia, of Sydney; and the Camaien, an East India packet-ship, 388 tons burthen, trading between Liverpool and Calcutta; all of which with the rich cargoes, estimated at an enormous amount, are irrecoverably lost. The Candahar, it appears, was on her passage from China to Bombay, with a cargo of tea and merchandise and several passengers. She was comparatively a new vessel. On the 21st June unfortunately the vessel encountered a heavy gale of wind, which drove her on a reef of rocks off the Indian coast, at Corlee, where she became a perfect wreck. Eight seamen unhappily met with a watery grave. The ship and contents are valued at £29,000. The Camaien, of Liverpool, is estimated at £60,000. She sailed from Liverpool on the 9th March, bound for Calcutta, laden with a cargo of Manchester goods, velvets, cottons, and an immense quantity of other property. The Royal Admiral, belonging to London, was totally lost on a reef of rocks, on the coast of Colabe, after having suffered great injury. The cargo consisted of miscellaneous goods. The ship was built at Lyme, in 1828. The Columbia Schooner was lost near Penang, in the early part of July last; she was laden with jewels and treasure of considerable value.—One seaman was drowned.

Raising of the Missouri.—This ill-fated vessel, the property of the American Government, and certainly the largest war steam-frigate in the world, was, it will be recollected, in the month of August, 1843, whilst conveying the Hon. Caleb Cushing to Alexandria, on a mission to China, burnt almost to the water's edge, off Gibraltar, and sunk in about four fathoms and a half water. Messrs. Lovell and Marshall, contractors for raising sunken vessels, and who are in the habit of cruising about in different parts of the world for that purpose, undertook to weigh the unfortunate frigate, on condition they should receive half the value of the property they recovered. These terms were

accepted, and operations accordingly commenced in the early part of the late spring. The contractors ascertained that the Missouri had become firmly embedded in a hard sand, and it was presumed that if they could succeed in planking her up to high water mark, thus damming in the water, and afterwards pumping it out, she would naturally rise and be easily brought to shore. The process of planking her up was proceeded with. Two very large chain pumps were then fixed on her bow, and twenty others in difierent parts of the Wreck, and 600 of the troops belonging to the garrison assisted in pumping her out. After an hour's working the water was reduced to two feet, and the ship righted a little, but in doing so, it is supposed she must have opened another leak, which caused a fresh flow of water, and though by immense exertions they reduced it by five feet, still the pressure of the sea from the outside was so great that it could not be lessened any further. The following day, however, the men re-commenced operations, and succeeded in reducing the water again to its former level, but on the morning of the 7th the contractors were compelled to give up the idea of raising her by the means they were then employing. It is said that the contractors have already expended 15,000 dollars on the work.

We observe that iron rigging is not always to be trusted; that of the iron ship Richard Cobden has given way, off the south coast of Ireland, outward bound, on the first voyage.

We observe that piracy on the coast of China is as flourishing as ever. Twelve thousand Rupees were plundered from a party of the 98th regt., (four men and a sergeant) while conveying it in a boat to Chuckchew. The four soldiers were forced overboard by a piratical vessel full of men.

Naval Intelligence.

Portsmouth.—Arrivals—Sept. 23, *Hecla*, st. v., Com. St. John, from Plymouth.—Oct. 2, *Clio*, Com. Fitzjames, from China; 4th moved into harbour—5th, *Queen* 110 and *St. Vencent* 120.—8th, H.F.M. yacht *Gomer*, Capt. Gou, bin, with His Majesty King Louis Philippe, and the flag of Admiral La Susse-accompanied by *Le Pluton*, Capt. Bouet, *La Caiman*, Capt. d'Valmont, *Elau*, *La Reine Amelie* yacht, and *Le Favor*.—H.M. yacht *Victoria and Albert*, Capt. Lord A. Fitzclarence—10th *Volcano*, Lieut. Miller, H.F.M. st. v. *Elau*, Lieut. de Valmont.—11th, *Alecto*, s. Lieut. Hoseason, with Lord Ellenborough, from Mediterranean.—13th, *Caledonia* 120, Capt. R. Milne, from Lisbon.—Departures—Sept. 26, *Queen* 110, Capt. Martin.—Oct. 11th, *Eclair* st. v., Com. .—*Rhadamanthus* st. v., for Plymouth, *Lightning*, st. v. for Sheerness.—16th, the ships of the French squadron, also H.M.S. *Rhadamanthus* for Cork.—22nd, the experimental brigs, and *Firebrand* on their experimental cruise.—24th, *Caledonia*, *Queen*, and *St. Vincent*, the former bearing the flag of Rear-Admiral Bowles.—At Spithead.—*Apollo*, and *Hecla*.—In Harbour.—*Excellent*, *Victory*, *Victoria and Albert*, *Nautilus*, *Eclair*, *Dwarf*, *Fearless*, and *Volcano*.—11th, Paid off, H.M.S. *Clio*, Com. Fitzjames.

Plymouth.—Arrivals.—20th, *Styx*, Capt. Vidal from Portsmouth.—27th, *Queen*, 110, from Portsmouth.—Oct. 5th *Resistance* 48, Com. G. E. Patey.—8th, *Eclair*, Com. G. M. B. Estcourt.—17th, *Flower*, from Cork.—18th, *Rhadamanthus* from Portsmouth.—Departures.—Sept. 20th, *Hecla*, st. v. Com. Duffill, *Styx*, Capt. Vidal for Azores.—1st Oct., *Queen*, Capt. Martin; *St. Vincent*, 120, Capt. Rowley.—11th, *Eclair* and *Rhadamanthus*.—20th, left for Cork. In Harbour.—*San Josef*, *Flower*, *Confiance*.—In the Sound.—*Resistance* and *Firebrand*.

Woolwich.—Arrival—Oct. 2nd, H.M. *Victoria and Albert* from Dundee,

having on board Her Most Gracious Majesty Queen Victoria. Departures—Sept. 26th, *Lightning*, Com. W. Roberts.—Oct. 6th, H.M. yacht *Victoria and Albert*, Capt. Lord A. Fitzclarence, for Portsmouth,

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Captain Evans.—Among the deaths we have to notice the demise of this gentleman, for twenty-four years harbour master of Holyhead; for thirty-six years agent to the Hon. Corporation of Trinity House; projector of a code of signals between Holyhead and Liverpool, in 1809; and agent for Lloyd's London and Liverpool, for thirty-three years. It does not often fall to our portion to notice the death of an individual more generally known and respected than Captain Evans. Being himself a sailor,—a man of unbounded benevolence, and of an active turn of mind,—his attention was always particularly called to sailors, and the shipping interest in general has greatly benefitted by his exertions in its behalf.

It will be seen from the proceedings of the Dock Committee that the lengthened and valuable services of Captain Evans have been duly appreciated by that body. Carnarvon Bay, which was yearly strewed with wrecks, and where the loss of life was awful, first attracted his attention, and by his persevering endeavours he succeeded, in 1809, in establishing that highly important and valuable light, the South Stack; he was also the sole projector of another equally important light, the Calf of Man. When we consider the vast number of lives probably saved by the establishment of these lights, we feel that we can hardly properly estimate the importance of them. In his capacity of agent for Lloyd's, Captain Evans was always anxious to render every assistance to vessels in distress; his own life has not been held valuable when he thought he could save others.—*Gore's Liverpool Advertiser.*

Wrecks of British Shipping.

cs crew saved—d drowned.—Continued from page 644.

VESSEL'S NAMES.	BETONG TO.	MASTERS,	FROM.	TO.	WRECKED.	WHEN.
Active 253	———	Hecate	Azores	———	C. Cruz	Oct. 9,
Alert	———	Johnson	sprung leak	foundered	in the Levin	Oct. 21, cs
Anna 255	———	Dixon	Cronstadt	———	———	Sept. cs
Ant	———	———	St. Thomas	St. John's N.	abandoned	Sept. 16 cs
Bellona	Bideford	Lawton	———	Quebec	foundered	Sept. 8 cs
Catherine	———	———	Sunderland	———	Bayeaux	Sept. 29 cs
Celia Large	———	Jones	Jamaica	London	Mariguana	Aug. 1 cs
Cecily 260	———	Large	found	derelict on	Mariguana	Sept. 5.
Comet	Southton	Jewell	———	———	off Fowey	Oct. 9. cs
Cornwall	———	Collins	Wallace N,S.	Liverpool	———	———
Cygnet	Whitby	———	sprung a leak	& foundered	Flamboro H.	Oct. 11. cs
Friendship	———	———	Ayr	London	Campbleton	Sept. 30 cs
Gondolier 265	———	———	China	London	Gaspar Strat	———
Grace Darling	Neath	Atteridge	Neath	Dublin	Dundalk	Oct. 10 cs
Henry	Newcastle	Adams	Wyburg	Hull	I. Lessoe	Sept. 30 cs
Jean and Mary	G. Yarmoth	Capon	sprung a leak	& foundered	Flamboro H.	Oct. 17.
J. Cleland	———	Douglas	Liverpool	Londonderry	P. Stewart	Oct. 15. cs
Lady Scott 270	———	Glenday	Liverpool	Cronstadt	Nickmans G.	Sept. 26 cs
Margaretta	Dundee	Forsyth	Tobasco	Peterburgh	Elsinore	Oct. 1.
Mariner	———	Curtis	———	———	Baltic	Sept, 25 cs
Mary Ann	St. Mary	Dickson	Halifax	———	Labrador Ct.	Aug. 23 cs
Mary	———	Bailey	Sierra Leone	Liverpool	Rush	Oct. 9. 3d
Mary & Eliza 275	———	Tregarthn	London	Cadiz	Scilly	Oct. 9. cs
Nancy	Newcastle	Doubleday	Petersburgh	Yarmouth	I. Lessoe	Sept. 30. cs
Nancy	Kincardine	———	Alloa	Balantrade	foundered	Oct. 2 cs
Normanby	Stockton	Smales	Stockton	run foul of	foundered	Oct. 11. cs
Ophelia	Dundee	wreck	drifted on	shore at	Thisted	Oct. 5.
Pr, of Orange 280	———	Thompson	Newcastle	Cherbourgh	nearBarfluer	Sept. 19.
Sophia	———	Starke	———	———	off Penzance	Oct. 9. cs
Swift	———	Maclean	Pictou	St. John	Mary Keys	Sept. 3. cs
Triad	———	Davies	———	———	Leven	Oct. 9. cs
Two Sisters	Yarmouth	Daniells	———	———	Gunfleet	Oct. 9. cs
Vine 285	———	Thompson	Newcastle	Rouen	Hasboro Sd.	Octt. 18 cs
Windsor Castle	———	———	Dundee	Edinburgh	Crail	Sept. 1. cs
W. Hamilton	———	Faulkner	Wick	Stettin	Swinebottms	Oct. 7. cs

Promotions and Appointments.

(From the Naval and Military Gazette.)

Promotions.

Captains—T. R. Eden and O. Stanley.

Commander—R. A. Oliver.

Lieutenants—L. A. Wharton, W. B. De Blaqueire, R. W. H. Alwick, M. B. Cockcraft.

Appointments.

Captains—H. W. Gifford (1841) to study at Naval College—K. Arthur, C.B. (1810) to be Superintendent of Sheerness Dockyard—G. Moubray (1812) to *Victory*.

Lieutenants—B. P. Priest (1842) to *Carysfort*—G. Ogle (1838) to command *Royalist*—A. Young (1842) and A. Cumming (1840) to *Espeigle*—S. Morrish to be flag lieut. to Sir S. Pym—C. Barker (1838) and W. G. J. Cunningham (1841) to *Firebrand*—J. Robinson to be agent to Mails—V. Baker (1839) and F. H. Stanfell (1840) to *Osprey*—L. T. Prevost (1841) to *Pantaloon*—W. K. Hall (1841) to *Waterwitch*—R. Fowke (1816) to *Poictiers*—B. M. Cockcraft (act) to *Alert*—A. Gordon (1839) to *Thunder*—G. P. Mends (1841) to *Mutine*.

Masters—J. Brodie te *Waterwitch*—

Mates—F. Quin to *Osprey*—H. R. Hardman to *Espeigle*—A. C. Birtwhistle, E. Maunsell, F. Gough, and T. Brandreth to *Ezcellent*—A. McNaughten to *Waterwitch*—J. King to Penelope—A. Wodehouse to *Flying Fish*—R. B. Beale to *Queen*.

Midshipmen—G. Erskine to *St. Vincent*—W. G. Jones to *Osprey*—C. Dickson to *Firebrand*—C. Melmoth to *Pantaloon*.

Second Master—W. G. Sturgess to *Pluto*.

Naval Cadets—D. McInray to *Flying Fish*—G. Prosser te *Espeigle*—C. Grant to *Osprey*—*W*. Dawson to *Mutine*—N. Carter to *Daring*—J. O. Mears to *Pantaloon*.

Surgeons—J. O. McWilliam, M.D., to *Hyderabad* convict ship—R. Guthris to *St. Vincent*.

Assistant Surgeons—H. Edmonds to *Mutine*—T. Tait to *Cruiser*—O. T. Miller to *San Josef*—G. J. Willes to *Firebrand*.

Chaplain—Rev. W. G. Tucker to *Albion*.

Paymaster and Pursers—C. B. Niblett *Ferret*—C. F. Turner to *Star*—W. C. Hillier to *Ocean*.

Clerks—A. Nash to *Snipe*—R. Bush to *Dwarf*.

Coast Guard.

Appointments—Lieut. H. Cox to command the *Lapwing*.

Removals—Mr. T. B. Glover to Sutton—Mr. C. Edlington to Ballyvaughan—Lieut. C. Blyth to Ardglass.

Births, Marriages, and Deaths.

Births.

At Freshwater, Isle of Wight, Sept. 13, the lady of Com. G. E. W. Hamond, R.N., of a daughter.

At Gole, Yorkshire, the lady of Capt. Sir J. C. Ross, R.N., of a son.

At Dartmouth, Oct. 6th, the lady of Mr. J. Coaker, R.N., of a son.

At Portsmouth, Oct. 9th, the lady of Lieut. M. Bourchier, of twin sons.

Marriages.

At Southampton, Oct. 4, J. Baker, Esq., to Catherine, daughter of Captain Woodriff, R.N.

At Plymouth, Oct. 3, C. Gahan, Esq., to Eiiza Mary, daughter of P. Bone, Esq. R.N.

At Marylebone, Oct. 2, W. Brodie, Esq., second son of Sir B. C. Brodie, Bart., to Maria, daughter of Capt. the Hon. W. Waldegrave, R.N., C.B.

At Berne, Sept. 18, Capt. H. Smith, R.N., C.B., to Anna, daughter of the late S. Costigin, Esq.

At Greenwich, R. Whitmore, Esq. to Margaret Elizabeth, daughter of Lieut. Rous, R.N, Greenwich Hospital.

Deaths.

Lately Admiral Sir J. P. Beresford, Bart.

At Holyhead, lately Capt. H. Evans, many years harbour master of that port.

At Torpoint, Sept. 21, Capt. R. Shannon, R.N., aged 56 years.

On the 27th of March last, on board H.M S. *Alert*, Lieut. W. B. Wills, R.N., only son of Capt. T. C. Wills, R.N., of Brockhurst House, near Gosport.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st September to the 20th October, 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9AM	3PM.	Min	Max	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	S.	30·06	30·13	54	60	44	62	NE	NE	4	6	bc	qo
22	Su.	30·07	30·02	54	58	47	59	NE	NE	3	4	bc	bc
23	M.	29·76	29·72	54	58	49	59	NE	NE	5	5	qo	qbc
24	Tu.	29·92	30·00	54	62	49	63	NE	NE	2	2	bc	bc
25	W.	30·20	30·22	50	62	43	63	N	NE	3	3	bcf	b
26	Th.	30·32	30·25	47	61	41	62	SE	N	1	2	bm	bm
27	F.	30·24	30·20	45	63	40	64	SE	SE	2	2	bmf	bm
28	S.	30·10	30·00	45	64	41	65	W	W	1	1	bmf	b
29	Su.	29·96	30·10	52	55	45	56	N	N	2	2	od 2)	bc
30	M.	30·35	30·37	43	56	35	57	N	NW	1	1	bcm	bcm
1	T.	30·13	30·03	53	62	42	63	SW	SW	4	3	bc	o
2	W.	29·72	29·62	57	64	48	65	SW	W	5	3	qop (2)	bc
3	T.	29·82	29·76	59	67	50	68	SW	W	5	4	qo	bcp (4
4	F.	30·01	29·98	53	62	47	63	W	W	2	3	b	bcm
5	S.	29·78	29·73	57	64	52	65	SW	SW	2	4	bcp 1)	bcr (4)
6	Su.	30·01	29·96	50	56	43	57	SW	W	1	1	bc	od (4
7	M.	29·92	29·95	48	56	43	57	NW	NW	3	3	bc	bcm
8	Tu.	29·93	29·81	41	54	33	55	SE	SW	2	4	bcm	bcm
9	W.	29·23	29·17	52	56	43	57	S	S	5	5	qbc	qo
10	Th	29·24	29·31	57	59	52	62	S	SW	4	2	o	bcp (2
11	F.	29·66	29·72	53	61	46	62	W	W	3	3	b	bc
12	S.	29·74	29·68	57	59	46	61	S	SW	4	3	bc	od (3) (4
13	Su.	29·48	29·36	58	61	52	62	S	SW	5	5	qbc	qbcp (4
14	M.	29·35	29·18	52	56	48	57	SW	SW	3	5	bcp 2)	or (3)(4)
15	T.	29·06	29·02	52	58	46	60	SW	SW	4	4	bc	bcp 3)
16	W.	28·96	29·06	47	51	46	52	N	W	4	2	or (1) (2)	bc
17	Th.	29·26	29·34	48	53	42	54	SW	W	3	3	bc	bc
18	F.	29·66	29·72	43	51	39	52	W	W	3	3	bc	bc
19	S.	29·80	29·08	43	51	36	52	SW	SW	5	5	qbc	qbcp 3) (4
20	Su.	29·48	29·45	48	52	44	53	SW	SW	2	2	bc	bc

September, 1844.—Mean height of the Barometer=30·037 inches; Mean temperature=58·1 degrees; depth of rain fallen 1·14 inches.

Page 648.—*For* 21st July to 20th August, *read* 21st August to 20th September.

TO OUR FRIENDS AND CORRESPONDENTS.

A correspondent who signs himself Z, has thrown no new light on the subject to which he alludes, as he will find on reading closely the passage he mentions, PROPERLY translated in page 623 of our last number.

The extraordinary events connected with the event of the Visit of the King of the French, being too historically important not to be preserved in the *Nautical Magazine;* we have enlarged our present number to record them. For the narrative, with occasional alterations, we are principally indebted to the *Portsmouth Herald.*

The Royal Cork Yacht Club is unavoidably postponed until our next.

Our arrangements for the present number were made before we received the "Dispatches aand Letters of Lord Nelson;" these with other New Works shall be noticed in our next.

Hunt, Printer, 3, New Church Street, Edgware Road.

Hunter Reef, *South-west of Kangelang, Java Sea.*

In making a passage from the west side of the Strait of Macassar towards Ampanan, in the Strait of Lombock, during the south-east monsoon, in September, finding we could not weather the Kalkoon shoals, the wind hanging far to the southward, bore away and passed to leeward of them, with the intention of proceeding to the southward between the Four Brothers and Kangelang.

Made Hog or Sapodi island bearing S.b.E., and saw several islands to the southward of it, apparently lying farther out than inserted in Mr. Horsburgh's chart. Worked to the eastward with a steady breeze from south-east, and next day saw Kangelang, and many small islands lying between it and Sapodi. The easternmost of these appeared to be four low islands, encircled with a reef which I supposed were the Four Brothers, they being inserted in this manner in Horsburgh's chart: still working to the eastward, wind steady from south-east. In our tack to the S.S.W. saw an extensive reef, apparently detached from these islands, about two miles, and at this time stretching to the eastward into our masthead horizon.

Four P.M. we tacked again about a quarter of a mile from this reef, and then plainly saw its eastern termination, that point of the reef being distant about two miles, and shewing a clear passage between it and Urk island of about seven miles. The trees on the nearest low islands were at this time visible from the topsail yards. This is a dangerous reef, steep to on the south and eastern sides; the water broke heavily along the southern part, although there was not a ripple on the northern edge, it is dry in some places, and of great extent in an east and west direction. In working through between it and Kangelang, I computed the distance to be about fifteen miles. From Urk island it appeared about seven miles, bearing W.N.W., and the distance from Urk Island to Kangelang seemed not more than seven or eight miles. We passed to the southward at 8h. P.M., between Urk Island and the shoal or reef, keeping near the island; beach plainly visible, although it was a hazy night.

The west side of Kangelang, so far as we worked along, appeared very clear. On arriving at Ampanan and reporting this reef; it was called Four Brothers, by one or two of the masters who trade between this place, Singapore, and Java, alleging that there were four dry patches upon it. Nevertheless the Fairy Queen was lately wrecked there, and several vessels before her have shared the same fate. It would also appear from Mr. Horsburgh's remark, that Captain Ross in passing through, could not see the Four Brothers, therefore imagined the channel to be wider; that he, like ourselves, had been looking for something like islands. The description which calls them merely sand-banks, or sunken islands, has no reasonable application to this reef; all that was dry when we passed, did not comprise a twentieth part of the extent; there may have been four or more dry spots of sand upon it, but certainly not so much taken collectively as would be called an island by any one; indeed I know of no reef of equal extent hereabouts, without as great a proportion being dry. It may yet be the Four

Brothers reef, but not islands of any kind. The question however presents itself on viewing the locality, whether this name has not originally been given to the islands which lie to the westward of it, and since, from their contiguity been applied to the reef. These islands are of the low and flat description, covered with trees, and are about 28 or 30 miles from Kangelang. From our masthead there appeared to be a channel between them and the reef, of two miles. The reef is about 12 or 14 miles in length, in an E.S.E. and W.N.W. direction.

R. L. Hunter.

China Navigation.—*Chusan and Amoy.—Extract from the Remarks of Mr. J. Jackson, R.N., late Master of H.M.S. Cornwallis.*

[In addition to the information we have already given in several numbers on these places the following from the pen of the intelligent Master of the Cornwallis, will be acceptable to the navigator.]

The prevailing winds at Chusan during January have been north-north-westerly, moderate and usually fine weather. Whenever the wind veers to the southward or south-eastward, (which it generally does about a day or two before full and change of moon) a strong north-westerly wind with thick rainy is sure to follow within forty-eight hours, and usually lasts one or two days. After rain is the time for ships to complete water; it is then not only plentiful, but clearer and better and more easily obtained. Very long hoses are required for watering here. The variation of the compass I found to be 37′ easterly.

On the 30th day of this month the *Cornwallis* sailed from Chusan. Ships bound to sea from Spithead, through St. Helens should be under way at high water slack. They will then have a favourable tide to take them round Kittow Point. The channel between Deer island and Tea island is a shorter way to Kittow point, but I would not recommend it for large ships. The Melville rock is very much in the way, and very likely to bring a stranger up; the eddies at all times of tide (except high and low water slack) will be troublesome to a small vessel, and I think very dangerous to a large one, The *Cornwallis* proceeded to sea by the south-east channel, and although the wind was light and variable we were at sea in about four hours. Any ship being put fair in mid-channel would be taken through without any wind, by a steady and fair tide.

In navigating the east coast of China, care should be taken (if the old charts are used) not to get to the westward of 120° 30′ E. longitude. The Heisan, (or Black islands) are nearly thirty miles out of their longitude, and the other group to the southward of them *(many of which are not yet on any chart)* are laid down considerably to the westward of their true positions. When the survey of Commanders Kellett and Collinson is circulated, the east coast of China will be navigated with more ease and safety than it has been heretofore.

The *Cornwallis* on the 1st of February anchored to the westward of the White Dog islands, at the entrance of the river Min. Running in, a good look-out was kept to make Ragged island, reported to be seen by Captain Blake of H.M.S. *Larne*. Nothing could be seen but Alligator island, the position of which was given by the officers of the Alli-

gator in 1840, lat. 26° 10′ N., long. 120° 32′ E., which I consider the correct position, as we were at noon in latitude by Meridian altitude 26° 7′ N., and long. by D.R. 120° 31′, the island being in sight, bearing N.b.E. about six or seven miles, atmosphere not clear. It therefore appears that Ragged island and Alligator island are the same, both discoveries agreeing so very close with the position we found it in. The correction issued by the Admiralty for this part of east coast of China (Sheet 4,) gives this dangerous islet (or rock I should call it,) a position eight miles to the northward, and five or six miles to the eastward of that given by the officers of the Alligator. Too much care cannot be paid to the currents in this part of the China Sea. Two miles an hour in the direction the monsoon *blows to*, is a safe allowance to make.

The White Dog islands are high and bold, may be seen at least seven leagues in clear weather, and approached any where on the east side to one and a half mile; good anchorage on a sandy bottom will be found to the westward of them. The *Cornwallis* anchored with the rocks off the west point of north-west island bearing N. ½ W., the village N.N.E., and the large rock off the south-west point of the south-east island E. ½ S., in 8 fathoms at low water. We rode out here a very strong breeze, the rise and fall was found to be twenty-four feet, but the strength of tide inconsiderable, not stronger than half knot.

The channel between the two large islands is ¾ miles wide, clear and safe, there being nothing but what shows itself; the bottom nearly all mud, with a depth of water from 17 to 8 and 9 fathoms. One mile to the northward of Cornwallis's anchorage, would shut this channel in, and be a very safe berth for any ship in the north-east monsoon; entirely sheltered.

I should not think the anchorage good on the north, or north-east side of these islands during the south-west monsoon, but would recommend any one wishing to anchor here to run in for the high land on the larboard side of the entrance to the Min, due west from the largest Dog island, and bring up in 7 or 8 fathoms low water. Here is good shelter from a S W. wind.

From these islands to the southward, running for Amoy, we experienced a current of two miles an hour in a south-west direction. Ships therefore should, if from the northward, and bound into Amoy during the north-east monsoon make the land well to the northward of the harbour, (the coast is high and remarkable thirty miles to the northward,) and when close to the entrance of the harbour two very remarkable peaked hills will be seen on the same ridge of high land; these peaks bear north-west from the entrance: several large sandy patches will also be seen when approaching the harbour, but a stranger should never run in with great confidence until he has made out Chin-chin pagoda, which stands on very high land on the larboard side of the entrance, and the pagoda of Qemoy which stands on rather low land on the starboard side of the entrance; having made these out, steer to the westward for the islands without fear, they are bold close to. The Chaw-chat rock is not so dangerous as is generally supposed; it always shews itself, and does not lie so far to the eastward of Go-soo island as the old survey gives it; it is a short half mile from the said island,

and if a ship be hard pushed she may safely steer between the rock and Go-soo island, there being a safe and clear channel, keeping rather nearer the island than the rock. Being inside the islands at the entrance of Amoy harbour, there is anchorage any where in 9 or 10 fathoms water; but the wind is fair in both monsoons for a ship going into Amoy, whereas leaving it a tack or two may be necessary.

Being at anchor under the island Goo-long-soo, and bound to sea, having to work out, the following directions will be found useful to a stranger.

Standing from the anchorage towards the ragged rocky point which lies about two miles south of Goo-long-soo, the said rocky point may be approached within a cable's length, where 10 fathoms water will be found; standing from thence over towards Amoy, Pagoda island should not be brought to bear to the southward of west, for the south side of Amoy is flat throughout. Having got to the eastward of the said rocky point, two miles south of Goo-long-soo, care should be taken not to shut Pagoda island in with the point, but tack when the pagoda comes on; you will then clear a middle bank which lies in the bay, having only thirteen feet water on it. The three small islets on the north side of the entrance to the bay, and the round island Chin-soo on the south side, are bold close to within a cable's length.

The meridian distance from Guard Island, Chusan, to the south-west point of Goo-long-soo island at Amoy, I made 16m. 3s. 95 west, the chronometer having changed its rate in the interval only a few hundredths.

Spring tides here run moderately, compared with those of the Yang-tze-keang, and the Chusan group, although the rise and fall is considerably more; the night tides rise from seventeen to eighteen feet, being about two or three feet more rise than a day tide, and seldom run stronger than one and a half knot.

There are some rocks under water in the inner harbour which are not laid down in any chart I have seen of Amoy. I would therefore recommend any one wishing to take his ship inside Goo-long-soo, to anchor outside first, and go in with a boat to sound, and look about.

H.M. ship *Cornwallis* worked up against the north-east monsoon inside the Chapple island, standing no nearer to Lam-tie island than two miles on the inshore tack, and standing towards Chapple island no nearer than a short mile. The banks of five fathoms which are laid down in the general chart, could not be found north of Chapple island. Several spots of discoloured water we passed over in the position assigned to the sandbanks, but the soundings were the same, twelve and thirteen fathoms.

An Account of the Mosquito Shore.—*By Lieutenant Joseph Smith Speer*, 1765.

The part now possessed by the Mosquito Indians, is from Boca Toro in lat. 10° 25′ N. (which was conquered by the Mosquito Indians in the month of August 1758,) to Cape Honduras, or Point A'Castillo, in

lat. 16° 4′ N., and about 300 leagues south-east and north-west, called by the Spaniards Costa Rica. These brave Indians have maintained their freedom against the Spaniard from the first attempt and conquest of Mexico to this time, and by tradition inforce and maintain a continual detestation and enmity against the Spaniard; reciting in their assemblies or councils the barbarous cruelties exercised by them on their neighbours and countrymen the Indians of Yucatan discovered in 1517.

The first knowledge and footing the English seem to have had of this part of the coast, began in the time of the bucanneers and pirates in the year 1630, at which time and ever since these Indians have maintained an inviolable friendship and attachment to the English, despising all other people; and in all wars with Spain, this has been the asylum and safe retreat for the Baymen.

The Spaniards had many rich settlements then on this coast, but in the several wars and time of the bucanneers, they at that time with the assistance of these Indians (who had then learnt the use of fire-arms) destroyed all their places of strength, and particularly a large and well built city called Pruxillo, and drove them back into the inland parts, which are Guathamata, Olancia, Nicaragua, Camiaga, Senegar, St. Louis, St. Pedro; in all which places there are rich gold and silver mines.

In the reign of Charles the Second, one of the Mosquito Kings was prevailed on to come to England, and then gave a grant to that King of a free possession of the Mosquito coast, and the Indians have assisted and encouraged the English to settle there ever since, and have continually called on the English officers to decide any of their disputes, and for many years have accepted of commissions from the Governor of Jamaica, or the commanding officer of Rattan, or the King's officer on the Mosquito shore, by which means they have been marshalled into different commands, under King, General, Admiral, Colonels, Captains, &c., and by a policy practiced some years past, have been kept from attacking the Spaniards in the time the English were at peace, by annual presents distributed by the commanding officer on the Mosquito shore.

In the year 1740 our Government thought proper for the protection of the Bay logwood trade, to take possession of the island of Rattan, and fortified the harbour in 1742, which is very good and safe, and so convenient and near the Bay that the ships run from thence in a day to the River Belize. At the same time a fort was built on the Mosquito shore, and some companies of the 49th regiment did duty at Rattan and on the shore, under the command of Major Caulfield. A man-of-war was also stationed at Rattan during the war. At the conclusion of the war in the year 1748, the Spaniards always jealous of this our settlement, demanded in a formal manner that we should evacuate Rattan and leave the shore, and pleaded their conquest, but were then refused; and acquainted that, that part of the coast called the Mosquito shore was never conquered by them; but in the latter end of the same year, the Spanish Ambassador, after the Peace was signed, making slight of the consequence of Rattan to his Master, or the English, desired the forts might be demolished, and the island left by the English;

and an order was obtained, the troop recalled, and the fortifications demolished, and even every house, both of the King's or private persons, levelled with the ground, the inhabitants retiring to the Mosquito shore. After which the Spaniard routed the Baymen, and took with their Guarda Costas, several of our vessels from the bar of Black River, and formed a design to make themselves again formidable in these parts; accordingly they began building a very strong and respectable fortress at Fort St. Fernando de Omoa nearly opposite to Rattan, and their plan is, when that is finished, to have men-of-war stationed there, and then possess themselves of Rattan and fortify that fort. If they effect these two plans there can be no vessel come on that coast, nor go to Honduras, without their permission; these plans are now in great forwardness. The fortifications at Omoa will be soon finished, and they have drawn troops from the Havannah in order to make a conquest of the Mosquito Indians, but as yet their attempts have been unsuccessful.

I shall now mention the present state of the shore at Black River, called by the Spaniards Rio Pinto. Black River is about N.N.W. and S.S.E. from Rattan thirty leagues, and is secured by a dangerous and difficult bar made by the current of the river it is named after; ships and vessels may lay off here and load, but no boat can venture over the bar without a pilot from the land. In this safety the people here settled, live, not dreading being surprised from the sea. At land to the westward, where the Spaniards are nearest to them, there are two different Passes, called the Great and Little Rocks, that are capable of being defended by a few against an army. They are watched in time of war or alarms, and in this consists the safety of the inhabitants, who had likewise of late years a company of soldiers from the regiment at Jamaica, and a few guns mounted to defend the mouths of the river and lagoons. The soldiers have been recalled, the Assembly of the island of Jamaica refusing to pay them the customary subsistence while on this detached duty, and the continual alarms the inhabitants receive on the making of Peace with Spain, for fear the shore should be ordered to be left to the Spaniards, prevents them from selling estates, and as this keeps them poor, they cannot afford to pay the troops necessary to assist in defending the settlement.

In the year 1763 an order was sent by Lord Egremont to the shore, commanding two officers then doing duty there to embark on board a man-of-war sent on that service, and to destroy all forts and fortified places occupied by the English, and withdraw all troops from the Bay of Honduras, or any place deemed Spanish property, in compliance with the 16th Article of the Treaty of Peace of 1762. This order created great consternation in the poor inhabitants of the shore (but imperfectly settled here since driven from Rattan) there being no forts nor forces on any place or part of the coast but this. It was therefore thought proper in a Council of war, composed of the Officers of the Regulars and Militia, that after going to the Bay and Rattan, and making a return of their state, to apply to the Governor of Jamaica for his advice and opinion, whether the Mosquito shore (upwards of one hundred years in possession of the English) was meant Spanish property in the present order. The company of soldiers being sent away,

the Governor's answer was, that he could not take on him to explain the order received, but that he would apply to his Majesty by his Ministers.

In the mean time the Spaniards strengthened in troops from the Havannah, availing themselves of this order, which they had received a copy of from their court, dispatched some officers to the shore, demanding a compliance with that order, by giving them possession of that settlement, offering at the same time to the inhabitants liberty to remain there under the government of the King of Spain.

In this situation the Indians were alarmed, and put themselves in arms, and came to know what the Spaniards wanted in their country; and were with great difficulty prevented from killing the messengers, being greatly displeased that any power should demand their country, especially an enemy they hated and despised. But what affected and irritated them most was, that the order they claimed under was from their friend (as they expressed it) the King of England, and they equally insisted on warring with the Spaniards, and that the English should remain there. An order came soon after from his Majesty's Secretary of State, Lord Halifax, promising his Majesty's protection to the inhabitants and Indians, and the Spaniards were acquainted that they could receive no countenance from Great Britain to any claim on this part of the coast. The Spaniards seem determined to make a conquest of these Indians, but have found a formidable enemy, that will create them much loss and trouble; the Indians now making inroads into their settlements and destroying wherever they meet them.

This is the present state of affairs on the Mosquito shore. The English inhabitants (that had hopes of his Majesty establishing a colony and giving them assurance of his protection, that they might improve the lands,) have for that purpose materials for building, and all necessaries for making sugar, rum, and indigo, which this country would produce, to be excelled by none; but the expense of the works would be great, and the fear of being obliged to quit the shore prevents them.

The vast and advantageous trade that might (if encouraged) be carried on here, would be soon manifested to England and our northern colonies, by the great opportunity of drawing money, and the most valuable of the produce of all the Spanish West Indies, from Mexico, Peru, Chili, Panama, and all the principal inland towns, where the mines are worked, as I can make plainly appear. And that it might be put out of the power of Spain to prevent, as the possessions or rather gatherers of all their wealth, want themselves every necessary and conveniency of life, being in the most abject slavery to the few officers that come to command over them from Old Spain; and in case of a rupture with Spain, by this key, an army might strike such a blow to Spain, as must immediately bring her to any terms, the poor wretches here being very unfit for war, and are always ready to revolt for liberty, which is continually experienced by the Spaniards, who are yet (by their usual policy) under a necessity of massacreing thousands to keep the authority they have gained here.

The present trade and produce from the Mosquito shore is, mahogany, sarsaparella, cotton, coffee, pimento, cocoa, tortoiseshell, indigo, cochineal, medicinal gums, balsams, and dying woods, great quantities of gold

and silver, both bullion, and milled. Silk grass grows here, and may be a great branch of trade when encouraged, the country very fertile, and extremely healthy, great plenty of provisions, and the land will produce any thing the most temperate climates produce, having great rivers for hundreds of miles up the country, and by the gradual rising of hills and large savannahs you go into what temperature of climate you please.

I have here taken the liberty to give this short sketch of this valuable part of the world, and my own experience of twenty-one years that I have had the honour to serve his Majesty, in and about these parts, have convinced me that the Spaniard by all means possible would dispossess us of this great, though easy, acquisition; and if their present measures are not prevented the first opportunity we have, and watched, by fixing a sufficient force at the Mosquito shore immediately, to repel any attempts they may have concerted, we shall lose all trade with this part of the Spanish West Indies, and consequently render our West India islands of less use to their Mother country.

The Dutch and French have within these two years drawn vast sums by trade from the Spanish main, that used to centre in Great Britain, in return for it manufactures; and we have only, I believe, this method left, of encouraging trading settlers here, as it commands all the Coast of Spain from Port O Vello to La Vera Cruz.

Derangement of the Compass.

Mr. Editor.—The following case may, perhaps, add one mite to the evidence already before the public, in the pages of your excellent Magazine, shewing the danger and disaster that so often falls upon the navigator from using defective compasses, or neglecting the local attraction. In the year 1840, the U. S. revenue cruiser Rusk, while lying at anchor in New York harbour, was struck by lightning and seriously damaged. From the date of that accident, her compasses were found to be quite useless, although repeatedly examined, retouched, and placed in a new binnacle. This derangement of the instruments was attributed to the stroke of lightning having imparted magnetic force to the iron-work about the quarter-deck, and particularly to the iron gearing on the rudder head and wheel.

In June 1842 this vessel was placed under my charge for the purpose of a cruise on the coast, to examine into the condition of the lighthouses, beacons, and buoys. At the time of taking charge I was not aware of the above facts, but in running through Long Island Sound, observed a very singular action of the card and obvious error in the needle. The enquiries which acquainted me with the truth, so far as those attached to the vessel could state, were followed up by an active search after the disturbing cause. The binnacle containing but one compass, was moved farther forward, but the card still vibrated as before. It was then replaced and four spare compasses brought up,—a diagram of the quarter-deck drawn to a large scale, and the compasses being set about in various positions on the deck, the several deflections

from the binnacle compass and from the truth, as nearly as could be estimated by placing a compass forward between the fore and main-mast (where there appeared but little if any local attraction,) all were noted down on the diagram, and these operations were afterwards repeated several times while lying at anchor, when the actual deviation of the needle could be accurately set down. But still nothing more could be decided than that there was a very powerful disturbing force somewhere near the binnacle, though nothing like magnetism could be detected in any of the iron work about. The cruise being along shore and a harbour made almost every night, the error in the compass was not much felt, though a great deal of valuable information was necessarily lost from the impossibility of obtaining correct azimuths while under way, or from on board the vessel.

The schooner had a trunk cabin extending from the main-mast to within fifteen feet of the stern, and below this remaining space or quarter deck were situated two lockers, entered by means of a small hatch or scuttle. One of the lockers was used for a bread room, the other for sails and rigging. It was not until three weeks after leaving New York, that I discovered the bulks heads of these lockers were sheathed with tin plate. The disturbance among the compasses was no longer a matter of wonder, but I must confess my great astonishment, after ordering a sheet of this tin to be removed and passed on deck, to find it very strongly magnetic. Its polarity I could not doubt when presenting its opposite angles to the needle they produced opposite deflection of 25 degrees through the glass cover of the compass,—and my satisfaction was extreme after every particle of tin was removed to find the needle in the binnacle within two degrees of the natural variation due to one position. By what cause this magnetic condition of the tin was produced, I cannot say,—whether by the effect of electricity, or by induction from remaining so long in a vertical position, my knowledge of the subject being too limited to justify the expression of an opinion; but the facts are before you and must go for what they are worth.

The use of tin sheathing for various under-deck lockers, &c., near the transoms and neighbourhood of the binnacle is a common practice in American ships, and one that should be discontinued. The Insurance Offices employ agents to examine the hull, rigging, and ground tackle of shipping in reference to their sea worthiness, Would not a rigid scrutiny into the condition of the binnacle and compasses, local attraction, &c., be as likely to prevent losses as substantial construction of the vessel and equipments.

I am, &c.,

J. W. P. Lewis,

Boston, October 15th, 1844. *Civil Engineer.*

Provisions and Regulations for the Merchant Service.

The following scale has been arranged and printed for the regulation of the ships belonging to a firm extensively engaged in commerce with all parts of the world :—

	Beef.	Pork.	Flour.	Suet.	Plumbs.	Rice.	Peas.	Coffee.	Tea.	Sugar.	Mustard.	Vinegar.	Limejuice.
	lb.	lb.	lb.	oz.	oz.	lb.	pint						
Sunday	1¼	..	½	1	1½	..	.. ¼	1 oz. per man daily. (Morn.)	½ oz. per man daily, (Even.)	1½ oz. per man daily.	½ oz. per man weekly.	½ pint weekly.	½ oz. per man daily.
Monday	..	1¼	..	..	..	..	.. ¼						
Tuesday	1¼	..	..	..	..	½	.. ¼						
Wednesday	..	1¼	..	..	..	..	.. ¼						
Thursday	1¼	..	½	1	..	..	..						
Friday	..	1¼	..	..	..	½	.. ¼						
Saturday	1¼	..	..	..	..	..	.. ¼						

" *Bread as much as they can eat without waste.*

Substitutes.—1lb. of preserved may be allowed on Sundays, in lieu of salt meat, after being a month at sea. Molasses, in lieu of plums, at a proportionate rate. 2lb. of potatoes, or yams, to be considered equal to ½lb. of flour and suet, or peas or rice. Cocoa, in lieu of tea or coffee, at a proportionate rate. Water calculated at the rate of one gallon per man per day. Each sailor to provide a spoon and a tin quart pot. Lime juice, mustard and vinegar, served out every week after being ten days on salt meat (except on voyages to ports in Europe or the Mediterranean) as, prescribed by Merchant Seamen's Bill. N.B. —The small stores are allowed in lieu of spirits.

This must be considered a liberal allowance. We find that it is greater as regards all the principal articles—viz., bread, water, beef, and pork—than the allowance which was formerly given to the crews of ships in the East India Company's service; and the variety which the preserved meat proposed to be substituted occasionally for salt meat on Sunday will afford, is a variation which will undoubtedly be very acceptable to the sailors, and conduce essentially to their well being. But beyond this Victualling Bill, the firm alluded to has drawn up a code of instructions for the government of their commanders at sea, which we append :—

1. The ship's articles, with scale of victualling attached, to be signed by each seaman on board, as also by commander and officers.

2. The master to keep a book of accounts for the voyage, and all accounts against the crew, or advances made them during the voyage, to be entered therein.

3. All vouchers for the voyage, or accounts against the crew, to be kept ready to deliver to the owners, or their agents, immediately on arrival at home, as well as the account current with the owners.

4. Disbursements to be examined and signed at all times before sailing, when it can be done without retarding the sailing of the vessel.

5. An inventory of the ship's materials to be made out every time the ship arrives in port, and also an account of the expenditure of stores and provisions used on the voyage, as well as a list of what may be left, specifying the condition.

6. Whenever cargo is on board, note a protest on your arrival at a

port, and if found damaged have a survey before the goods are moved from the hold.

7. The provisions for the crew are of the very best description used in the Merchant Service; but if there is any waste or any unnecessary expenditure, the commander will be held responsible for it.

8. The crew are not allowed to carry spirits with them on leaving a port; the drinking of grog is to be discouraged; and drunkards discharged as soon as practicable.

9. The sails to be kept well aired and dry; and great attention paid to rigging and sails, to prevent chafing or damage at sea, from bad weather or other causes.

10. The forecastle to be kept clean, and occasionally whitewashed or painted; the decks paid or coated; the coal hole to be cleaned out as often as possible; and the ship kept well aired, fore and aft; and her hull, above and below, kept tight. *The crew to have the afternoon of each Friday to wash and mend clothes.*

11. Our vessels are at all times fully supplied with what stores are considered necessary for the voyage they are going upon, before leaving England; it is therefore expected that no bills or accounts will be contracted abroad, except in cases of necessity.

12. When men absent themselves from duty, or are sick, let their names, and the circumstances be recorded in the log-book, and when they desert the ship, send their names to the owners as early as possible.

13. *Apprentices are especially under the care of the commander, and he is, by precept and example, required to instruct them, and to keep them from going into bad company.*

14. No commander is allowed to carry goods (as a venture) of any sort, his privileges being perfectly understood, and clearly defined in the agreement specially entered into.

15. Economy and close attention to the ship is expected and strictly required; and when abroad the commander *to write the owners by each overland mail* (direct *viâ* Marseilles), *and by every good opportunity, enclosing duplicate of last letter.*

16. How to manage with disabled seamen, or distressed British seamen in foreign ports—refer to the Merchant Seamen's Bill, passed 1844; and for averages refer to Lorimer's 'Instructions to Master Mariners.'

17. The commander, officers, and crew must conform to the laws of any country they may be at.

18. All bills of lading to be discharged, or a receipt taken for whatever goods are delivered from the vessel.

19. The whole ship to be at all times kept in the best of order—in hull, rigging, and sails; and well victualled and equipped before leaving port; *a good look-out to be always kept;* chronometers, compasses, and ship's reckoning carefully worked; *and on approaching the land the lead to be strictly attended to.*

20. *Divine service to be performed every Sunday.*

21. No excuse will be accepted for the non-fulfilment of the foregoing articles.

[We have taken the foregoing from the columns of that useful and well conducted paper the *Shipping and Mercantile Gazette*, and cannot but consider that the whole system is well calculated to ensure the comfort of the seamen employed under it. With regard to the provisions we append the following extract from the Naval regulations for the sake of comparison.]

THERE shall be allowed to every person serving in Her Majesty's Navy the following *daily* quantities of Provisions, viz.:—

Biscuit 1lb., spirits ¼ pint, fresh meat 1 lb., vegetables ¾ lb., sugar 1½ oz., chocolate 1 oz., tea ¼ oz.

When fresh meat and vegetables cannot be issued, there shall be allowed in lieu thereof, salt beef ¾ lb., flour ¾ lb., or salt pork ¾ lb., peas ½ pint alternately. And *weekly* whether fresh or salt meat be issued, oatmeal ½ pint per man.

There shall be also allowed, *weekly*, vinegar not exceeding ½ pint per man, for occasional use only when actually required, but not to be expended unnecessarily, nor considered as subject to be paid for when not used.

2. The following scheme shows the proportion of provisions, with salt meat for each man for 14 days.

Days of the Week.	Biscuit, lbs.	Spirits, pints.	Salt. Beef. lbs.	Salt. Pork, lbs.	Flour, lbs.	Peas, pints.	Sugar, oz.	Chocolate or Cocoa, oz.	Tea, oz.	Oatmeal, and Vinegar, each pints.
Sunday	1	¼	¾	..	¾	..	1½	1	¼	½ as explained above.
Monday	1	¼	..	¾	..	½	1½	1	¼	
Tuesday	1	¼	¾	..	¾	..	1½	1	¼	
Wednesday	1	¼	..	¾	..	½	1½	1	¼	
Thursday	1	¼	¾	..	¾	..	1½	1	¼	
Friday	1	¼	..	¾	..	½	1½	1	¼	
Saturday	1	¼	¾	..	¾	..	1½	1	¼	
Sunday	1	¼	..	¾	..	½	1½	1	¼	½ as explained above.
Monday	1	¼	¾	..	¾	..	1½	1	¼	
Tuesday	1	¼	..	¾	..	½	1½	1	¼	
Wednesday	1	¼	¾	..	¾	..	1½	1	¼	
Thursday	1	¼	..	¾	..	½	1½	1	¼	
Friday	1	¼	¾	..	¾	..	1½	1	¼	
Saturday	1	¼	..	¾	..	½	1½	1	¼	
Proportion for 14 days	14	3½	5¼	5¼	5¼	3½	21	14	3½	1

3. Suet and raisins, or suet and currants, shall be substituted for one fourth part of the forementioned proportion of flour, one-half of the said fourth part in suet, and the other half in raisins or currants, at the following rates, viz.:—

½ lb. of suet is to be considered equal to 1 lb. of flour.

1 lb. of raisins or ½ lb. of currants is to be considered equal to 1 lb. of flour.

4. In case it should be found necessary to issue substitutes for any of the above species of provisions,—

1¼ lb. of soft bread, or 1 lb. of rice or sago, or 1 lb. of flour, is to be considered equal to 1 lb. of biscuit.

1 pint of wine, or 2 quarts of strong beer, or 1 gallon of small beer, is to be considered equal to ¼ of a pint of spirits.

1 oz. of coffee, 1 oz. of cocoa or chocolate, ¼ oz. of tea, are to be considered equal to each other.

1 lb. of sago, 1 lb. of Scotch pot or pearl barley, 1 lb. of rice, are to be considered equal to each other.

1 lb. rice, or 1 pint of calavances, or 1 pint of dholl, is to be considered equal to 1 pint of peas.

1 lb. of rice is to be considered equal to 1 quart of oatmeal.

1 lb. of butter is to be considered equal to 1 lb. of sugar.

2 lbs. of cheese are to be considered equal to 1 lb. chocolate or cocoa.

¼ lb. of onions or ¼ lb. of leeks, is to be considered equal to 1 lb. of other vegetables.

5. When the issue of salt meat shall be renewed, after fresh meat shall have been served, the salt meat on the first day of issue is not to be of the same species as that which may have been issued on the last day of salt meat serving, unless the remains of salt beef and pork in the Paymaster and Purser's charge shall be unequal, in which case it is to be of that species of which the greater quantity shall be remaining on board.

6. When the Lords Commissioners of the Admiralty, or a Commander-in-Chief or Senior Officer, shall judge it expedient to direct that the aforesaid Allowance of Provisions be diminished in any particular, care shall be taken that the Men be punctually paid for the quantity so to be short allowed, according to such Scale as the Board of Admiralty may from time to time establish with reference to the actual Cost of the Provisions.

7. The Captains of single ships may, also, in cases of absolute necessity, cause the said Allowance of Provisions to be diminished; as, however, all persons are to be equal in point of Victualling, whenever Short Allowance becomes necessary it is to be made to *every* individual on board without exception, and payment for the same is punctually to be made under such Regulations as the Board of Admiralty may from time to time establish.

8. Neither Provisions nor Victualling Stores are to be drawn or taken up on shore, or sent out of the Ship, for any other purpose than for victualling portions of the Crew, or on other Public Account: and as the allowance of Provisions is calculated and intended for daily subsistence only, not any Savings thereof made, either by the Officers or others of the Crew, shall be paid to them *in kind*, nor be deemed to have become private property, nor be purchased on any other than the Public Account; but the Paymaster and Purser shall, at the expiration of every one, two, or three months, as the Captain may judge expedient, pay for all such quantities of biscuit, spirits, salt meat, flour, (including suet, raisins, or currants, calculated into flour), sugar, cocoa or chocolate, and tea, or the usual substitutes for any of those articles (except fresh meat and vegetables) as shall during such period have been saved

by, or short allowed to, the different messes in the ship, according to such Scale and Regulations as shall be established by the Board of Admiralty; but no payments shall be made for savings of oatmeal or peas, except when the ship's company shall be on a general short allowance, nor for any savings of fresh meat or vegetables, except such as may be made by sick messes.

[We believe that Edwards' Preserved Potato is used in the Sick Mess of H.M. Ships, and now that it is packed in tin canisters (which must effectually protect it from all damp of the hold, &c.,) the greatest objection is removed to extending the supply. But in Merchant Shipping, where it is not uncommon to hear of scurvy, even in the present day, in our opinion it ought to find a prominent place in the scale of diet. And our reasons for that opinion will be found in another page.—Ed.]

On the Patent Azimuth and Steering Compasses.

By Mr. E. J. Dent.

[The following we believe was read at the last meeting of the British Association; and we have looked in vain for it among the reports in the Periodicals. But having received a copy from the author, we lay it forthwith before our readers, as it has not yet appeared in its present shape. If we are not mistaken the novelty which the invention possesses of enabling an observer to reverse the same end of a horizontal needle so that the true magnetic meridian may be known, besides qualities it also possesses for use at sea, will hereafter render it an important addition to the Mariners' Compass.—Ed.]

Amongst the evils arising from the present construction of compasses we may observe the following:—1st. The friction arising from the imperfect mode of suspension; which is well known to be that of a hollow cup in the centre of the needle, resting upon a steel point; in which case it is obvious that a want of horizontality in the card (which, from a circumstance that I shall mention, must unavoidably occur,) will cause considerable friction between the convex sides of the pivot and the sides of the cup. 2dly. A considerable error is caused by the assumption, that the *magnetic axis* of the needle coincides with what is called the *maker's axis,* which is the line determined by the marks or zero points on the extremities of the needle; which error in flat needles, such as are usually applied to compass-cards, is frequently of such magnitude as to be quite inadmissible, even in compasses for common purposes, much less for those intended for accurate experiment. 3dly. Another source of inconvenience and inaccuracy arises from the unequal amount of inertia as regards the axis, or horizontal line drawn through the centre of the card, about which line it is compelled to vibrate or deviate from its horizontal position by means of the alternate pitching and rolling of the vessel. To explain this, suppose a vessel steering N. or S. by compass, a pitching motion would in this case cause the card to move about a line drawn through the E. and W. points, and this arises from the circumstance of the gymbal apparatus, in which the card is suspended not completing its vibration in the same time as the card does in its vibrations above and below the horizontal plane; which difference in the time of vibration of each, causes the convex

sides of the pin upon which the card turns to come in contact with the sides of the cup in which it moves, and thereby communicates a vibratory motion to the card. From the position of the needle with respect to the axis referred to, it is plain that the distance of the centre of gyration, and consequently the time of vibration about that axis is a maximum.

Again, in a rolling motion (that is, about the axis of the vessel,) the vessel's head being in the same direction, the card from the same cause will in this case vibrate about an axis drawn through the N. and S. points of the card: and the time of its vibration is then a minimum.

In any other motion of the vessel, the corresponding motion of the card is compounded of these two effects, which produces the "wadling" or undulatory motion observed when the motion of the vessel is considerable and irregular; and the cause of which, I believe, has not been previously assigned. However well, therefore, the gymbal apparatus, in which the card is placed, is balanced, yet as the card has a motion or time of vibration peculiar to itself, depending upon the position of the axis of its vertical vibrations with respect to the axis of the needle—which vibrations are not altogether under the control of the gymbals although its vibrations are continually checked, and its quiescence disturbed by it in consequence of the supporting pin coming in contact with the sides of the cup, as before mentioned—yet in the present construction of the binnacle compass, the card ever will be subject to irregular deviations from the horizontal plane, arising from this cause.

The mode by which (I trust) I have removed these evils has been, by altering the nature of the suspension; that is, by suspending the card in a similar way to the balance of a chronometer, and with equal delicacy, both ends of the pivot acting on diamonds, and the holes jewelled, by which means the card is constrained to move very nearly in the horizontal plane, since in this respect it is entirely under the control of the gymbals. The friction is also considerably reduced by this mode of suspension. The great accuracy with which the card returns to the same position has been clearly shown by a great number of experiments: and I am not aware of any mode which offers so severe a test in the present case, as the agreement between consecutive observations. To remove the error arising from the non-agreement of the *marked* or *maker's* with the *magnetic axis*, a simple contrivance is effected for the *inversion of the card*, so that either side of it may be placed *above* or *below*. Since the marked axis of the needle is in each of these positions at equal distances from, but on opposite sides of the magnetic meridian, a mean of an equal number of observations in both positions of the card will evidently eliminate any error of this nature, and give the true magnetic azimuth of the observed object *at the time of observation* by an equal compensation of error. It is also plain that the constant adjustment required to make a delicate needle horizontal in different magnetic latitudes is rendered thus unnecessary.

There can be no doubt that the want of the principle of *inversion* in Azimuth Compasses has most materially vitiated every result hitherto made to determine the variation of the needle in different parts of the world; and I consider the usual construction of these instruments to be very discreditable, in the present state of mechanical science. Those

persons who have been accustomed to the instruments known by the name of Kater's or Schmalcalder's Azimuth Compasses, which were considered more accurate than any that had been previously made, are well aware of the constant attention they require to render them horizontal in different parts of the world; and they must doubtless have seen marked upon them what is called their "index errors," which are to be applied to the observed azimuths; in some amounting to two or three degrees, and more. How such "index errors," were determined has not been explained, and perhaps it would be useles to enquire. In all probability it was done by observing, with the different compasses, the azimuth of a fixed mark, the *true* magnetic azimuth of which was *presumed* to be known; by which mode every consideration of secular or diurnal change in the position of the needle is dispensed with, and the method of course subject to error, which can only be removed by *inversion*, and without which no instrument of the kind can have any claim to accuracy.

I trust, by the mode of construction by which I have proposed to remedy the existing evils in compasses, a very superior common binnacle or steering compass will be introduced; and another instrument also, for the united purposes of an Azimuth or Surveying Compass and Dipping Needle, having great facility of manipulation, and with every refinement as regards workmanship and quality of the needles, at a much less price than either of these instruments can be procured for, as they are usually constructed.

Ancient Cannon.

(Concluded from p. 657.)

Impressed as I am with a firm conviction that the *material* just described belongs to a remote period, and intending to give an early date to the armament of which it formed a part, I must beg permission, in support of my opinion, to refer to the ancient history of ordnance, and to trace the application and improvement of the invention.

It is asserted that gunpowder was employed in an early age by the Chinese, as well as by the Greeks; but, however that may be, it is quite certain that a compound of its elements was known about the middle of the thirteenth century to Roger Bacon, who suggested its application to purposes of war; and it is probable this suggestion was acted upon, for we find that guns are mentioned in the Romance of Sir Tryamor, written during the reign of Edward the Second. Albert the great, Bishop of Ratisbon, who died in 1280, in his work "*de mirabilibus mundi*," describes gunpowder, which he states to consist of one part of sulphur, two of charcoal of willows, and six of saltpetre. Many old chronicles, however, ascribe the invention to Bartholdus Schwarz, a German monk, who appears, about the year 1320, to have compounded the elements of gunpowder in such proportions as to produce a powerfully explosive mixture. It is probable

that very soon after this date, some apparatus was contrived for the employment of this agent in war, for the purpose at first, perhaps, of producing confusion and dismay in the ranks of the enemy, by the noise of the explosion and the smoke and smell by which it was accompanied. The Flemings at this period took the lead of all the Northern nations of Europe in every thing pertaining to the arts, and there is every reason to believe that they were the first to contrive engines for the application of this novel invention to the destruction of armies and besieged places. Our Edward the Third, the greatest captain of his time, is generally admitted to have been the first who brought this new species of artillery into efficient action; and there is no doubt that he was indebted to his alliance with the Flemings for this powerful auxiliary, which probably contributed in a great degree to the wonderful success of his campaigns. I am not disposed to question the credit of any author who speaks of *fire arms* at any time after Schwarz's invention, and I therefore refer to the testimony of John Barbour, Archdeacon of Aberdeen, who in his beautiful metrical history of King Robert the Bruce relates that *guns*, then known as "crakys of war," were seen in the army of Edward the Third, in his first expedition against the Scots in the year 1327*. He was accompanied in this campaign by John de Hainault and a company of his countrymen, who, it is not very unreasonable to suppose, may have brought over with them, and then first taught the English monarch the value of their invention.

Before proceeding further with a chronological account of the application of the invention, it may be convenient to inquire what were the forms and construction of the earliest pieces of ordnance and the material of which they were composed. Diego Ufano in his work, originally written in Spanish, but afterwards translated into French, and republished at Franckfort in 1614, under the title of "Vraie Instruction de l'Artillerie," speaking of early cannons, and particularly of those used at Claudia fossa, according to his account in the year 1366, says, "Mais quant à la façon, il est tout certain, que les premiéres piéces ont éte fort mal faites, composes avec grande peine, et non sans danger mises en œuvre. Car ne sachant encore rien de fonte d'icelles, on se contentoit de prendre quelques grosses et fortes tables ou lames de fer, lesquelles on composait et ageançot en rond, les serrant de gros anneaux ou cercles de fer, comme on voit les tonneaux, et ceci on le chargeoit d'une poudre grosse et mal propre, comme elle etoit du commencement de son invention, á discretion."

St. Remy, another ancient writer upon the same subject, says,— "Qu'elles ne consistoïent qu'en de fortes tables de fer qu'on disposoit à peu pres cylindriquement, les serront avec de cercles de fer. Avec le

* "Twa noweltyeis that dai thai saw
That forouth in Scotland had been nane,
Tymmris for helmys were the tane.

That t'other 'crakys wer of war,'
That thai before heard never er,
Of thai tua things thai had ferly
That nycht thai walkyt stalwartly."
Book 19.

temps cette forme s'est perfectionnée et elle s'est approchée insensiblement de celle que nos canons ont aujourd'hui. It is quite clear, therefore, that the earliest cannon of which we have any account were constructed upon the same principles, and composed of the same material, as those above described. The invention, however, was of too important a nature to allow of its remaining long stationary, and, as no subject was likely to engage so much attention, so we may suppose that no branches of the mechanical arts would make more rapid progress in improvement than those engaged in the manufacture of ordnance. There is good reason to suppose that even before the close of the fourteenth century cannons of brass and other cast metals existed, and that they were by no means uncommon in the early part of the fifteenth century is well ascertained.

I shall now proceed to quote, in chronological order, such notices of the early employment of artillery as I have had an opportunity of referring to, and will, from time to time, advert to the progressive improvement in the manufacture, in order to be able to fix a date to the *materiel* under consideration.

According to Du Cange, cannons were used at the siege of Puy Guillaume, a castle in Auvergne, in 1338, and he quotes the account of Barthelemi de Drash, treasurer of war for that year. "A Henri de Faumechon pour avoir poudre et autres choses necessaires aux canons qui otoient devant Puy Guillaume." The Chronicle of Du Guesclin, in relation to this siege, also states, "they ordered cannons to attack the town." Voltaire, in his general history, dates the introduction of ordnance a few years before this time; and Marion says that cannons first appeared in France in the time of Philip of Valois, who reigned from 1328 to 1350.

In 1340 Le Quesnoy is besieged by Mirepoix, and defends itself with cannons and bombards, which threw great stones; and in the same year the English are said to have had at the seige of Eu large iron pieces, with which they threw round stones.

Next in order of time comes the famous battle of Crecy (1346), in which it is generally admitted that Edward the Third employed pieces of ordnance. Froissart, it is true, does not mention them; but in my present temper of mind, I prefer the account of Villani, and those who agree with him. In the very next year he speaks of artillery being used at the celebrated siege of Calais, which appears to have been a famous school for the improvement of ordnance. He says,—"The King made no attacks upon the town, as he knew it would be only lost labour, and he was sparing of his men and *artillery*." Again: "The King of England and his Council studied night and day to invent engines to annoy the town." Camden says,—"It is certain that Edward the Third used guns at the seige of Calais, for *gunnarii* had pay there, as appears of record." It may here be observed that Froissart, who was a Fleming, had probably all his life been familiar with the manufacture and use of cannon; and, therefore, did not feel it necessary to make particular mention of them, except in extraordinary instances. Thus we find him very ready to offer an almost incredible account of the great cannon, or bombard, said to have been employed at the seige of Oudenarde, which, he says, "was fifty feet long, threw great stones,

and when discharged made a noise as if all the devils in hell had broken loose." I am not able to ascertain the date of this siege, but I find it stated that this *monstre* cannon was made under the direction of D'Arteville, the famous Brewer of Ghent, who was dead before the year 1346, and consequently before the battle of Crecy.

In 1359, Peter King of Aragon had a bombard on board his ship, with which he dismasted a vessel belonging to his enemy, the King of Castile.

Petrarch, in his Dialogus de remediis utriusque Fortunæ, written in 1358, speaks of cannon as no longer the objects of astonishment or alarm: "ita communis est ut quolibet genus armorum."

As early as the year 1368 the French artillery was so respectable, that there was an officer whom we would now call "the Master of the Ordnance." There is an account dated in this year, in which a payment is recorded to William l'Escuyer, Master of the King's cannons, for seeking 100lbs. of material, to make powder for four great cannons, to put in the garrison of Harfluer."

In the fifth volume of the Archæologia is an interesting account of an antique piece of ordnance, which was fished up off the Goodwin Sands in 1776. It was of brass, *cast*, and had trunnions, and a variety of ornaments. Mr. King, an eminent antiquary of that time, supposes this piece to have been lost about the year 1370, and states several cogent reasons in support of his conjecture. He adds, that he had seen, at a place called the Fort, at Margate, in Kent, a very large old iron cannon, of extraordinary length, which had upon it the date 1354.

In 1372 the city of Augsburg had three large cannon of bronze (ad explodendos saxorum globos) which threw bullets of stone of 50, 70, and 127 lbs., that were said to be able to break down walls. In this year also the French vessels were armed with cannon, at the sea-fight of La Rochelle.

In 1377 it is stated that iron cannon were cast at Erfurth, and that the inhabitants of Franckfort ordered a piece to be cast whose bullet should weigh 1000 lbs.

In 1378, when the English besieged St. Malo, they had 400 cannon: probably hand-cannon, or early musketry, which same into use about this time. In this year a founder, named Aarau, of Augsburg, cast 20 pieces in bronze, or brass, also iron bullets, both solid and hollow. At this time the Venetians used cannon against the Genoese, at the siege of Chioggia, at which the renowned Peter Doria was killed by a stone bullet, weighing 195 lbs., discharged from a famous bombard called la Trevisienne. This fact is of importance, as showing that the first balls or stuffing used for ordnance were made of stone.

In the reign of Richard the Second there is good reason to suppose that both cannon and gunpowder were manufactured in England. There is in Rymer, in the first year of this reign (1377), a commission directed to Sir Thomas Norbury, "to buy two large and two small cannon: also saltpetre, sulphur, and charcoal, for making gunpowder, and 600 stone balls for cannons, and other ammunitions and stores to be sent to the castle of Brest, in Brittany."

In 1383, at the seige of Ypres, by the English, under the Bishop of Norwich, "the garrison defended themselves so well with stones, arrows,

lances, Greek fire, and certain engines called *guns*, that they obliged the besiegers to decamp with such precipitation, that they left behind them their *great guns*, which were of inestimable value."

In 1385, when Charles VI., King of France, besieged the strong fort of Dam, in Flanders, "les pierres des canons venoient jusque à ses tentes."

In 1386, the English fleet met two French ships sailing towards Sluys, which were taken and brought into Sandwich. There was on board a master gunner, who had served at Calais under Sir Hugh Calverly, and also, as Walsingham relates, "gonnæ plures cum magna quantitate pulveris, cujus pretium prævaluit omnibus manubiis supra dictis." "Gonnæ, Galli canones vocant." In this same year a naval engagement took place, and Froissart relates that "Jean Bucq, the Flemish admiral, was in a ship that carried three cannons, which cast forth darts and quarrels so large and heavy, that they did great damage where they fell."

In 1390 a memorable expedition was conducted into Africa by the Duke de Bourbon. Froissart, in his account of the siege of Tunis, which was gallantly defended by the Saracens against the Christians, makes frequent mention of artillery and cannons as employed by both parties. Amongst other things, he says, "the Christians sent some light vessels called brigandines, armed with bricolles and canons first towards the harbour." It appears from this that the introduction of ordnance did not immediately supersede the ancient military engines; on the contrary, the old *mechanical* artillery continued to be used, in conjunction with the new, for upwards of two hundred years after the invention of gunpowder.

About the year 1400, a foundry for casting cannon was established at Marienbourg, and from inventories of this period it appears that many towns in Germany possessed brass pieces of ordnance and gunpowder. A few years later a cannon foundry was established in the city of Dantzic.

Towards the end of Richard the Second's and the beginning of Henry the Fourth's reign, cannon appear to have been so plentiful in England, that they were placed in distant castles and fortresses. In an inventory taken at Holy Island in 1401, there are among other things, "iiii *gonnys*"—in another taken in 1409 there are "iii *gunnes*"—and at a still later period the inventory taken at the same place contains "iiii *gunnæ* bene reparatæ cum *pulvere*."

Henry the Fifth, besides the artillery which he inherited from his predecessors, provided himself with a large supply, and in his time we first hear of a Master of the Ordnance. In the fourth year of his reign, when he prepared to go over into France, he stocked himself with "all manner of ordinyance, that is to say, canones, gonnes, tripgettis, engines, scales, bastilles, &c." and when he was engaged in the siege of Harfleur "there came unto him ships laden with gonnes, and gunpowder." In 1414 the King directed an order to Nicholas Mewbury, Master of the Ordnance, "commanding him to cause 7000 stone balls to be cut in the quarries on Maidstone heath for guns of different sorts; also to prepare twelve carriages for large guns, twenty pipes of gun-

powder of charcoal of willows, and various other stores for the use of the guns."

At the siege of Orleans in 1428, the English had fifteen cannons, which did great execution. It is said that they were laden at the breech, and probably were chamber pieces, or *patereros*. There is still at Toulouse a brass cannon cast in the year 1438, and it is said that one exists of the year 1418. It is not necessary to pursue this branch of the subject further than to say that from year to year great improvements appear to have taken place in the manufacture of ordnance, and that a great many varieties of guns had been introduced about the middle of this century. In 1471, when preparations were making against an invasion of the Scots, King Edward the Fourth ordered to be seized for his use, " Bumbardos, canones, culvereynes, fowelers, serpentynes, et alios canones quoscunque, ac pulveres sulphureos, saltpetre, petras, ferrum, plumbum et omnimodas alias stuffuras pro eisdem canonibus necessarias et opportunas." Louis XI. at the same time possessed a powerful artillery, and had extensive foundries at Paris, Tours, Orleans, and Amiens.*

I have been thus particular in tracing the history of the progress of the invention and the art of gunnery, in order to establish the fact that great improvements had taken place in the manufacture of ordnance before the time at which we are now arrived in this inquiry. It appears quite certain that even before the close of the fourteenth century, cannons of brass and cast metal were known, and that early in the succeeding age they were in general use. There is no doubt that guns of forged iron still continued to be employed, but at the time of which I am now speaking, I apprehend they formed the exception to the general rule, and that any miscellaneous collection of artillery from the beginning to the middle of the fifteenth century, would contain a majority of pieces of *brass* or *cast metal*. It is, therefore, a very strong fact in support of the opinion that this *materiel* belongs to a very early period in the history of fire arms, that among so many pieces *not one* has been found of *brass* or *cast metal*, or indeed of any metal except *forged iron*, which we have seen was the first material employed.

There is good evidence, I think, to shew that at the time these objects

* The first cannons cast in England are said to have been executed by John Owen in 1521; but the art appears to have been introduced in a state of high perfection. There are now at Woolwich several guns lately recovered from the wreck of the " Mary Rose," which was sunk at Spithead in 1545, and amongst them two large brass cannons, the one a 68, the other a 24 pounder, which in beauty of design and workmanship are equal to any thing that could be produced in the present day. I must not omit to mention, however much it may interfere with my subsequent conjectures, that there are also two pieces of hammered iron which were raised from the same spot. The one of them is of great length, formed of bars and hoops of iron, and is firmly imbedded in a large and heavy piece of timber. It must at all times have been an unwieldy and inefficient engine, and I cannot imagine that it could have co-existed, for purposes of active service on shipboard, with those highly finished pieces just mentioned. The gunpowder which would be suitable for the one would blow the other to pieces, and the gunners accustomed to the former would hardly be persuaded to run the risk of discharging the latter. It occurs to me, therefore, that these rude pieces of the olden time, if indeed they ever were on board the Mary Rose, must have been used for ballast or some other illegitimate purpose.
[We cannot coincide in such an opinion.—Ed. N M.]

were produced, the casting of metals was an art still in its infancy, or imperfectly known. It is true there are two small bullets of cast iron, but the large shot (18lb.) is of *wrought* iron, clumsily hammered into shape; from which I infer that the manufacturers of these particular specimens wanted the skill or the means to cast any considerable mass. Other circumstances in favour of the claim of great antiquity, are the *rudeness* of the *materiel* itself, attesting the low state of the mechanical arts—the want of trunnions and cascabel in every instance—the absence of every kind of ornament—the nature of the stuffings, &c.

I have carefully examined the oldest specimens of artillery which exist in the Tower and at the Repository at Woolwich, but can find nothing that does not appear to be much more modern than my own. The oldest piece in the Tower is referred by Sir Samuel Meyrick to the time of Henry the Sixth, and is formed of bars and hoops like No. 1; but the workmanship is very superior, and there are several attempts at ornament. Those at Woolwich, apparently of the same date, are all more or less ornamented, and are generally provided with trunnions and cascabel.

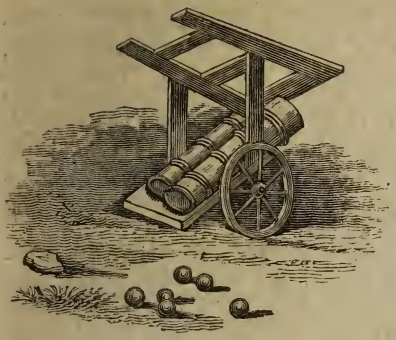
In the hope of discovering something to enable me to fix a date to the armament to which this antique artillery belonged, I have referred to some of the earliest pictorial representations of ordnance which exist, and from which I have taken a few sketches.

Nos. 1 and 2 are copied from those beautifully illuminated MSS. of Froissart in the British Museum, supposed to have been executed in his own time, or shortly after, and consequently about the commencement of the fifteenth century, since this author died early in the reign of Henry the Fourth, No. 1 is from a picture of the siege of Aubenton, by the Earl of Hainault, in 1339. I do not find that Froissart makes mention of cannon being employed on this occasion; but it is reasonable to suppose that the painter must have had some good ground for introducing them. I consider that this picture furnishes strong evidence of the existence of ordnance at the date of the siege, if not of its employment there. It is the work of an accomplished artist, who was illustrating an event which probably happened within the century in which he lived; and the introduction of cannon, if they did not then exist, would be an instance of anachronism as egregious and inexcusable, as if an eminent painter of the present day should introduce a steam boat into the representation of a sea-fight of the year 1750. No. 2 is a sketch of one of three cannons presented in a picture of the siege of Tunis in the year 1390, before referred to. Mr. King, speaking of this, says, "it is a representation of the form of cannon, constructed with rings and iron bars, and of the manner in which they were mounted at sieges on their first introduction into this country, in the time of Edward the Third.

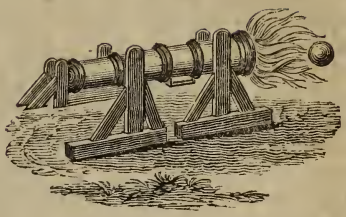
No. 3 is taken from an ancient MS. in the Sloanian Library, called the Chronicle of St. Denys; and according to Sir Samuel Meyrick pourtrays the cannons in use at the commencement of Henry the Fourth's reign. It appears to be cast, and has a process for the purpose of elevation and depression.

No 4 is copied from that exquisitely illuminated manuscript in the British Museum, entitled, "le Roman de la Rose," which is coeval with the reign of Henry the Sixth.

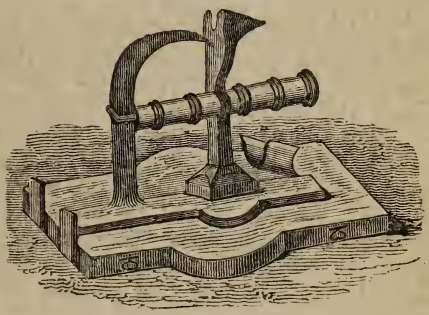
No. 1.



No. 2.



No. 6.



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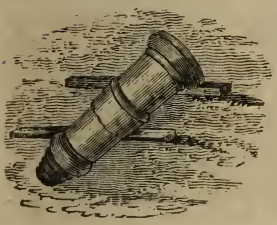
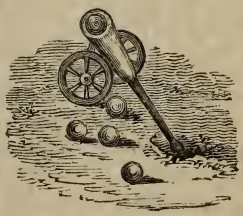
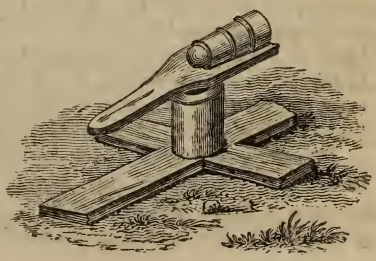


No. 3.



No. 5.

No. 4.



No. 5 is from a manuscript translation, by Vasqua de Lucene, of the works of Quintus Curtius, executed in the fifteenth century.

Nos 6 and 7 are taken from a beautifully illustrated MS. (in the King's Library, British Museum) of the time of Edward the Fourth, and represent the cannons in use during this reign. These pieces appear to be highly finished, and to have considerable ornament; and the peculiar azure colour given to them in the original, I imagine, is intended to represent bronze or some cast metal. I may sum up the result of my investigations in a few words, namely, that I can nowhere find pictorial representations of cannon more rude and inartificial than those discovered in the Island of Walney.

It now remains for me to endeavour to answer a most important inquiry, namely, when and by what means, and with what intent, were these munitions transported to the particular place where they were found? It is beyond question that they could only have been brought there by sea; and I have adduced some evidence to show that the vessel must have been of very inconsiderable size, which favours the presumption that it belonged to an early age. It is quite clear that such a number and variety of pieces could never have been employed on board such a ship as we must suppose this wreck to have been; and the inference is therefore irresistible that it must have been a transport laden with warlike stores; but whence coming, or whither proceeding, is alike subject of conjecture. The only event recorded in history which would seem, at first sight, to account for the accumulation of such a quantity of *materiel* at this particular position is the fact, that, in 1487, Lambert Simnel, the pretended Earl of Warwick, landed here with a considerable army; but notwithstanding the near coincidence of the place of Simnel's descent with the locality of the discovery, I think I shall be able to show good grounds for my opinion, "that these munitions were not brought there by him."

The main spring and support of this mad enterprise was Margaret, widow of Charles the Bold, Duke of Burgundy, and sister of our Edward the Fourth, who is stated at this time to have possessed great wealth, and to have acquired by her virtuous conduct and demeanour great authority among the Flemings. She would consequently have at command all the resources of Flanders, which long before this time was famed for excellence in the mechanical arts, and particularly for the manufacture of ordnance. Martin Swart, who commanded the 2,000 Germans hired for this service, is represented as a leader, not only of peerless valour, but of great experience and knowledge in the art of war. He had in all probability been trained in arms under the conduct of that warlike Prince, Charles the Bold himself, who, in his campaign against the Swiss in 1476, is said to have had a battering train of 50 great cannons, besides field artillery, and small fire-arms. If therefore the armament was provided with artillery, of which, however, no mention is made in history, it is but reasonable to suppose that it would have corresponded with that which existed at that time in Flanders, and with which Swart must have been too well acquainted to think of employing this clumsy and ill appointed *materiel*. The armament fitted out in Flanders, passed over into Ireland, and after proclaiming and crowning Simnel in Dublin, according to Holinshed,

"with a great multitude of beggarly Irishmen, they sailed into England with this new found King, and landed for a purpose, at the Pile of Fouldry, within a little of Lancaster." This purpose was to join Sir Thomas Broughton, one of the chiefs of the conspiracy, whose estates lay in the immediate neighbourhood; and they might besides have been influenced to make their descent on this particular part of the coast, knowing that they were likely to encounter no resistance from the Abbot of Furness and his peaceful vassals. The army lay encamped for some time on a moor near Ulverstone, which is still called Swart-moor, after the gallant conductor of the enterprise. They were afterwards, after a desperate struggle, defeated and put to rout by the King's forces at Stoke, and I apprehend the fortune of the day would have been the same if they had been in possession of this "battering train," which, however, according to my view, had then been quietly reposing for more than a century in the sands of the Island of Walney.

In considering all the circumstances connected with these antiquities, and referring back with a view of giving them a date, I find it difficult to get out of the fourteenth century. If Mr. King, who appears to have been a very industrious and able antiquary, is justified in giving to a brass cannon, cast and highly ornamented, the date of 1370, surely I need not hesitate to give a later, though still very ancient, date to these ill-fashioned pieces of iron. In the first of Richard the Second (1377 or 8) we find the King, or rather the Council of Regency, making preparations of warlike stores to send over to the Castle of Brest in Britany; and among other things cannon, stone balls for cannon, and material for gunpowder are enumerated, In the next year "There went to sea an army of men that should go over into Britany to aid the Duke there, under the command of Sir John Arundell, Sir Thomas Percy, and others; a sufficient power, undoubtedly, to have done a great enterprise." They encountered a tremendous storm, and part of the fleet was driven into the Irish sea, when twenty-five ships and one thousand men, with Sir John Arundell himself, were lost. Walsingham and Holinshed both gave a particular account of Arundell's losses, and speak generally of "horses and other riches," but nowhere is mention made of arms or munitions of any kind. It is, however, not unreasonable to suppose that the military stores, which we have seen were providing for this particular service, were on board some transport in the fleet, and once *en route* we may go on to conjecture that this unfortunate craft may have been driven by the tempest upon the Lancashire coast.

Passing on to other historical events which may afford further ground for conjecture, I come to the two expeditions which Richard the Second conducted in person into Ireland, the first in 1394, the other in 1399. Before this time we have traced into his possession a good quantity of artillery; for besides what he inherited from his grandfather, and what he himself legitimately obtained by manufacture and purchase, we learn that the capture of the two French ships, as mentioned by Walsingham, in 1386, brought him a considerable supply.

It is only reasonable to suppose that this weak and vain-glo-

rious prince (who appears particularly to have laboured under the delusion that he possessed talents for military affairs) would take care to provide himself, in the campaigns which he personally conducted, with those engines which his grandfather Edward the Third, and his father the Black Prince, had employed with such wonderful success. The latter expedition was undertaken in a romantic spirit to avenge the death of his cousin Mortimer, and the preparations which he made were upon so expensive and extravagant a scale as to give rise to the disaffection and discontent amongst his subjects, which favoured the designs, and contributed to the success of the Duke of Lancaster.

In this last campaign the King was accompanied by the intrepid young Harry of Monmouth, afterwards King Henry the Fifth, (who, a few years later, made such successful use of artillery in France,) and who on this occasion received the honour of knighthood. Admitting then that Richard the Second, in both or either of these expeditions was provided with artillery, nothing was so easy as to suppose a thousand accidents, which may have caused the wreck of one of his transports on the Island of Walney. Hollinshed relates that at the time the King was desirous to return from Dublin to hinder the designs of the usurper of his throne, great storms and tempests prevailed for several successive weeks; but

"I'm weary of conjectures, this must end them."

I venture to express a hope that some member of the Society of Anquaries, whose acquirements and precedent pursuits have better qualified him for the task, will be induced to take up this inquiry with a view of arriving at some reasonable conclusion as to the date and object of the armament and the cause of the disaster. If, in future years, anything likely to contribute to the solution of the problem should be brought to light, I will not fail to communicate it to you; and in the meantime, beg to apologize for this lengthy and, and, I fear, very tedious detail.

The Hardy Testimonial.

Sir.—Doubtless you have heard that subscriptions have been in progress for raising a "Testimonial" to the memory of the late Admiral Sir Thomas Hardy. The glorious 21st October was taken advantage of by the Managing Committee, to lay the foundation stone, the ceremony being performed by the lady of the High Sheriff of this county.

The site chosen for this tribute is Blagdon Hill, rising some 830 feet in the rear of Weymouth, commanding extensive land and sea views,—the Isle of Wight on the east, Berry Head on the west, and a boundless sea view, for many assert that under favourable circumstances, the tower will be seen from Alderney.

It will be placed on the very spot selected by the Ordnance Surveyors, as the base of one of their great triangles; and, what is more remarkable, on the very same hill where the Admiral, when in command of the Experimental Squadron (1827) caused to be erected a temporary beacon, at the same time suggesting to the Trinity Board the advan-

tages it would afford to Marines, for experience hand often proved to him when cruising in this part of the coast, that Blagdon was frequently seen peering out above the fog or thick haze, when Portland and the lower land in the neigbourhood was obscured. Hence it is likely to be of some utility to mariners.

PROPOSED BREAKWATER IN TABLE BAY.

The noble proposition for the erection of a breakwater in Table Bay, suggested in the financial minute laid by the Governor before the Legislative Council on Tuesday last, has we are not surprised to learn, elicited a burst of universal approbation on the part of the public. The following letters, laid on the Council table by the Secretary to Government show clearly the great importance of this truly national undertaking:—

Post Office, 1st May, 1844.

SIR.—In compliance with your request, I have the honor to annex a statement shewing the number and tonnage of all vessels that have anchored in Table Bay during the last twenty years; also the names and tonnage (with the dates) of vessels wrecked, in consequence of northerly gales, during the above period.

You will perceive that by far the greater part of the loss occurred in the years 1831 and 1842, for more than half of the aggregate tonnage was lost in the latter year, when the convict ship Waterloo was wrecked, and 187 people perished in the space of an hour. She was a badly

fastened and a decayed vessel; but I do not remember any loss of life by the other mentioned wrecks. In 1842 there were 16 coasters; they made collectively 76 coasting voyages in the year, which deducted from the whole number of arrivals in Table Bay during that year, would leave 102 vessel as the number which entered the bay for water and refreshments, and for the purposes of trade. Three of the coasters belonged to the Colonial Government, namely, the brig Locust, and the schooners Francis and Buckbay Packet; the former sunk in the Breede River, and was sold in 1825, the Buckbay Packet was sold in 1826, and the Francis foundered at sea in the same year.

In 1843 there were 12 coasters; they made collectively 79 coasting voyages in the year, which deducted from the whole number of arrivals in Table Bay during that year, would leave 326 vessels which entered the bay for water and refreshments, and for the purposes of trade; shewing an increase of 224 vessels per annum, in a period of 20 years.

This great increase of shipping frequenting Table Bay, the numerous wrecks, and the lamentable loss of life by the wreck of the Waterloo, would seem to afford strong grounds for rendering Table Bay a secure harbor by means of a Breakwater. Moorings would be worse than useless; and it is my intention to forward to you my views on this important subject.

I am, &c.,
J. BANCE, *Port Captain.*

The Hon. John Montagu.

STATEMENT of the Number and Tonnage of all Vessels that have entered Table Bay annually, from the year 1824 to 1844;—and the Number of Vessels that have been wrecked during the said period, in consequence of Northerly Gales.

Years	No. of Vessels.	Tonnage.	Years of wrecks.	Dates.	Vessels' Names.	Descript. of Vessels.	Tonnage.
1824	178	35,632	1824	Aug. 4	Antonio.	Brig.	144
1825	221	45,815	1826	June	Nautilus.	—	180
1826	262	56,273	1828	June 16	Importer.	—	219
1827	229	57,580	—	—	Walsingham.	Barque.	194
1828	237	63,716	1830	June 3	Silence. 5	Brig.	225
1829	252	66,862	—	June 4	Alfred.	Barque.	267
1830	271	68,453	1831	June 17	Calpe.	Brig.	965
1831	240	65,010	—	—	Usk.	—	123
1832	278	76,817	—	—	Rambler.	—	170
1833	345	87,600	—	—	Vine 10	—	170
1834	319	100,338	—	—	Candian.	Barque.	226
1835	363	105,960	—	—	Sir James Saumerez.	Brig.	102
1836	396	107,445	1837	Aug. 18	Antelope.	Schooner.	107
1837	398	122,283	—	—	Ranger.	Ship.	270
1838	465	143,507	1840	July 16	Howard. 15	Barque.	199
1839	506	150,983	1842	July 13	Speedy.	Schooner.	94
1840	487	130.463	—	—	Arion-.	Brig.	246
1841	433	133,963	—	Aug. 28	Wrterloo.	Ship.	414
1842	478	128,224	—	—	Abercrombie Robinson.	—	1414
1843	405	112,870	—	Sept. 9	Reform. 20	Brig.	121
			—	—	Ghika.	Schooner.	122
			—	—	John Bagshaw.	Ship.	416
			—	—	Henry Hoyle.	Brig.	207
			—	—	Fairfield. 24	Barque.	198

REMARKS.

2—Struck the ground while at anchor, and before she drove ; was lost in consequence.
6—Was very badly found in ground tackle.
10—Badly found in ground tackle, drove foul of the Candian, and carried her ashore
13—Very badly found in ground tackle.
15—Wrecked from carelessness.
16—Badly found in ground tackle.
17—Was hove off, and afterwards condemned.
18—Badly found in ground tackle, and let go the sheet-anchor when driving without being stocked.
19—Anchored in shoal water, and was wrecked in consequence of not having room to veer cable.
20—Was hove off after being condemned.

Post-Office, 16th May, 1844.

Sir.—Having recently laid before you a statement showing the number and tonnage of all vessels that have entered Table Bay annually, during the last twenty years, and also the number and the names of vessels that have been wrecked, during the same period, in consequence of northerly gales.

I have the honor to bring under your notice a Plan of Table Bay, containing a sketch of an isolated breakwater, such being (in my humble opinion) the best, if not the only means of rendering Table Bay a safe and convenient harbour, at an assumed cost of about 200,000*l.* or an outlay of 30,000*l.* annually, for seven successive years. It is not my intention to enter into any particulars as to the heavy expense attendant upon carrying out so great a work, but briefly to shew the advantages and practicability of constructing a Breakwater in Table Bay of sufficient extent and stability, to protect, from northerly gales, a squadron of Her Majesty's ships, and as many merchant vessels as would probably meet together in the harbour at the same time ; and in furtherance of my views on this important subject, I beg leave to submit to your consideration the following observations.

In 1824 the number of vessels that entered Table Bay for the purposes of trade, or to obtain refreshments (together with coasters) amounted to 178, or 35,632 tons of shipping. In 1843 the number that entered the Bay for the above purposes, was 405, or 112,870 tons of shipping, (including coasters,) which clearly shews the great increase of the trade and importance of Cape Town and of the Colony generally, during the last twenty years. It is true the largest number of vessels which entered the Bay in any one year, as appears by the statement recently furnished you, was in 1839; but it may be attributed to the system which then prevailed, of bonding coffee in this colony from foreign places, for the purpose of exportation to Great Britain, which process brought many vessels to this port, and the large amount of compensation money paid into the colony on account of the slave emancipation, gave, for the time, a great stimulus to the trade, and no doubt was another cause why the largest number of vessels which entered the port appears to have been in 1839. I have, however, good reasons to believe that the number of ships will be much larger this year than the last; and that they

will increase in number for several successive years, in consequence of the judicious abolition of the port dues.

Ships do not generally enter Table Bay, during the winter months, that is in June, July, August, and part of September, except from necessity or to deliver cargoes for Cape Town; but whenever there shall be a breakwater, to protect ships of the largest description from northerly gales, vessels in want of repairs or refreshments would then enter the harbour at all seasons of the year; for the largest vessels might be repaired, by means of a patent slip, as effectually, and with as little loss of time, as they could be in any port of Great Britain. Vessels above 300 tons burthen should not lay in Table Bay during the above mentioned period (in its present state) for there are no means of assisting such vessels, if in want of an anchor and cable, during a northerly gale. Vessels below that tonnage can be so assisted; and should they drive on shore they quickly beat so high upon the beach, (particularly should they go ashore shortly before high water, which is the proper time to beach a vessel when compelled to do so,) that they may occasionally be got afloat again without much injury, and scarcely any risk or loss of life. It is very different with large vessels, for should they drive ashore, they strike the ground so far from the beach, that their wreck is almost inevitable, and loss of life may in consequence occur, as in the case of the Waterloo, although she was so decayed, that in a few minutes after striking the ground, she literally went into fragments, and many of the unfortunates were killed by the pieces of wreck with which they were surrounded, and incapable of extricating themselves from their perilous situation. I will therefore repeat my opinion that vessels above 300 tons should not lay at anchor in Table Bay during the winter months, unless specially prepared by having extra ground tackle on board; and masters of ships (above that tonnage) employed by the government, should be forbidden to enter Table Bay during the above mentioned period, unless compelled to do so from urgent necessity.

In the event of war, her Majesty's ships would necessarily be ordered to rendezvous in Table Bay at all seasons of the year; to afford protection to the shipping and the capital, for it is obvious that such protection could not be afforded should the rendezvous be, as it now is, in Simons Bay, as it is a leeward port for nearly eight months in the year, and a squadron of H.M. ships might there be windbound for several successive days, whilst an enemy's squadron would be at liberty to capture or destroy vessels off the Cape, or in Table Bay, and even to bombard Cape Town. In Table Bay, therefore, her Majesty's ships must of necessity rendezvous in time of war. And when, by means of a breakwater, Table Bay would become a safe harbour, the site between the Chavonne and Amsterdam batteries is well adapted for a naval yard where ships of a large class could be hauled up on a slip and repaired or re-coppered. It might also be a building yard for small vessels, as the wood in the neighbourhood of the Knysna is fit for the construction of sloops of war.

A breakwater in Table Bay would also add materially to the defences of Cape Town; for some heavy pieces of artillery might be planted upon the east end of it, by which means the whole of the head of the

bay would be either within range of such pieces, or of the batteries from the shore.

I am aware of the great expense attendant upon the construction of a breakwater, more particularly at the commencement of the work; but the facilities in the neighbourhood are so great, there being an inexhaustible supply of stone, and an inclined plane from the quarries to the strand, that I feel persuaded if such a work were fairly set going, the progress would be very rapid; for the number of working days in a year at this port far exceed the number of working days at Plymouth; and I have often witnessed the tremendous sea which used to roll into Plymouth Sound, before the construction of the breakwater, far heavier than any sea that I have seen roll into Table Bay during the eighteen years I have been Port Captain. And it is on this ground I offer an opinion that the original sections of the Plymouth breakwater would probably be of sufficient strength for a breakwater in Table Bay.

I will only further remark, that, during the last twenty years, the loss in tonnage, in consequence of northerly gales, has been about one ton in every three hundred tons; the total loss, during the same period, may be stated at 6000 tons; which, converted into sterling money, would certainly defray more than a third of the sum required for constructing a breakwater in Table Bay.

The geographical position of the Cape with regard to Great Britain and her empire in India, and with her possessions and numerous colonies to the eastward, many of them formed during the last twelve years, and the probable increase of trade with China, under the recent treaty, all having a direct or indirect tendency to raise this colony, and more particularly Cape Town and the environs, in importance; and looking also at the gradual developement of the resources of this colony, (which have been retarded from adverse circumstances that no longer exist,) and the happy results which must follow the opening of internal communication by means of good roads and other great improvements which are in progress, the advantages of constructing a breakwater in Table Bay cannot be too highly estimated; and if there be any fouudation in the remark that her Majesty's ships would in time of war be necessitated to rendezvous in Table Bay for reasons herein before stated, then, I should hope that her Majesty's Government at home may be induced to consider the rendering Table Bay a safe harbour, a national work, and will largely assist the colony in carrying out so important a measure, which, whenever it may be effected, would undoubtedly be beneficial to Great Britain and her possessions to the eastward, and of the greatest utility to the immense mercantile navy which annually pass and repass the Cape.

I respectfully suggest that the appointment of a committee of competent persons, to investigate and report upon this matter, would be the best means of placing it, in all its bearings, clearly before you. And in the event of such committee being appointed, I would further suggest that the instructions for their guidance might contain, amongst other propositions which you may deem necessary, the following, viz.

1. Whether the isolated breakwater proposed, would be sufficient for the protection of large ships, during northerly gales; and to what extent it would afford protection to vessels usually employed in the

trade of the colony, to the ships in the trade to and from India and China, and to the British possessions to the eastward of the Cape of Good Hope, and the probable cost of constructing such a breakwater.

2. Whether there would be any danger, in consequence of such a breakwater, of the water becoming shoaler on the west side of Table Bay; and generally to embody in their report such remarks and suggestions as they may consider advantageous *to the shipping*, and for *their better security* in Table Bay during the winter season.

I am, &c. J. BANCE, *Port Captain.*

To the Hon. John Montague.

TABLE BAY.—*Reflections on the proposed Bance Port by a Naval Officer.*

A project for a breakwater in Table Bay is revived by the Port Captain, and some remarks on his accompanying data, are submitted to the consideration of the public. Nine vessels are expressly stated to have been lost through causes distinct from the qualities of Table Bay, and vessels under 300 tons are encouraged to resort there in winter months, because they can be supplied with ground tackle in northerly gales. Now all but three of the list of 24 are under that tonnage. If extra ground tackle did figure among these losses, where is the proffered security? If it did not there was obviously neglect somewhere; and the *Bagshaw* remains the single loss owing to Table Bay, and the moral is not a sea wall, but Corporal Buntin's maxim, "Ask soon, and ask often," for ground tackle.

After eighteen years experience the Port Captain truly affirms that no vessels above 300 tons should anchor in Table Bay in the winter season, without extra ground tackle on board; as in case of parting they take the bottom so far from the beach that wreck is almost inevitable, and loss of life the probable consequence. *Ergo,* the precaution is prudent at all seasons; for to confine northerly gales to the months enumerated, he must annihilate among other zephyrs that which beached H. M.S. *Sceptre* in November; notwithstanding an increased resort is confidently anticipated because of the abolition of port dues, or twenty shillings per hundred tons!

But unhappily for the ground tackle specific, the gallant commander warns his *protegés* that the right time to be stranded to save their lives is high water, thus recognising the danger of foundering at their anchors. An imperfect list of 50 vessels wrecked or stranded in or about Table Bay during the last fourteen of the twenty years embraced by Captain Bance is subjoined.*

* Wrecked or stranded in Table Bay from June 1828 to December 1842, or 14 years—northerly winds, Walsingham, Importer, Silence, Alfred, Saumarez, Vine, Usk, Rambler, Calpe, Antelope, Ranger, Howard, Cygnet, Orange grove, Bride, Ellen, Emerald, 1842 July 13, Arion, Speedy, Saldanha Packet, Galatea, Reform, Ghika, Waterloo, Henry Hoyle, John Bagshaw, Abercrombie Robinson, Sept. 1, Fairfield. In southerly gales in entering or departing Sincapore, Thorne, Gondolier, Royal William, Dunlop, Trafalgar, Paragon, Palmer, Bengal, Catherine Jamieson, Udney Castle, Prince Rupert, Henry Stewart, Dash, Auguste Sophie, Falcon, Wanderer, Asia. These disasters appear to bear a ratio to the result which the panic of 1842 corroborates.

It would be presumptuous to dogmatize on so important a project as a counterpart of the Plymouth breakwater, but observations on the probability of the success of such a scheme may be permitted. In this sandy colony all the rivers have fluctuating bars dependent on the clearing power of the waves, or the superior pressure to force a passage out; besides this general feature thousands of tons of sand, thrown up by the sea at the bottom of the great False Bay are drifted by the dry south-east winds across the isthmus into the indent of which Table Bay, already shallow, is an immediate continuation and presents the sharpest turn for the tide and current which sets towards it in strong south-easters, replacing along the weather shore the water blown out of the bay. The maximum rise and fall of tide is less than six feet, adequate for agitation but not for scouring, and there is no back water. The insignificant salt river is alternately open and blocked up, while numerous failures even with abundance of back water stare the projectors in the face. Partial illustrations from the tideless sea (for little allusion to the "Imperial mimic of old Egypt's piles" is made) are totally inapplicable to these premises, and the wisdom of obstruction, in any shape, to the combined clearing powers of the sea and tide on its sand of eight months drift from the general surface, and on the offal of the town, may reasonably be doubted, not only from analogy but by inspection of the sudden deepening of the water at a particular spot to the westward of Cape Town. The waves of Table Bay in northerly gales equal any on the face of the globe, and two hundred yards of the finished top of Plymouth breakwater, each block weighing from three to five tons, have been more than once washed over to the inner base. Although surrounded by rock it is judiciously constructed of limestone of great specific gravity brought from some distance and deposited on stiff mud; experience shows that on light ground the heaviest materials are liable to be blown up.

But there are gales which defy precaution but shelter from the wind, the Cape forms no exception, and the danger bears a ratio to the squalliness of the gales, and to the nature of the bottom. On these Captain Bance has furnished pithy comments.

That vessels driving and parting are supplied with ground tackle from a leewardly shore, and that they also run the risk of foundering. The late talented comptroller of customs observes, "chain cables are not to be relied on in Table Bay, they frequently snap asunder." These argue a squally region, or a superficial deposit on ledges of rock, or both; increase the deposit with sand, and the anchors will probably drag through all without biting deep enough to take the ledge, before the vessel is ashore. A mole without backwater must beget some deposit in a sandy bay; lee berths would be at an alarming discount and open on the flank to the violent south-easters. They would be all lee berths in turn, except the pivot corner. The Plymouth breakwater with its excellent ground, and protected on three sides by high land, might berth six ships on the seaward line, but not in safety. Among other disasters, the writer witnessed the wrecks of fourteen ships, blown from under its lee. It covers safe harbours, while with the obvious inferiority of ground, of position, and of tide, the capacity of the Bance port would be small; it would form a rock under the lee for eight months.

South-easters would impede departure, and probably beget an expensive shifting shoal, like that in Madras roads from an abandoned undertaking. Sir John Barrow truly describes Table Bay, faulty in *every point* as a resort for shipping already. If "Harbour of Refuge" mean its common acceptation, a port for retreat from a lee shore, the proposed one has no pretension to the name. Vessels to windward of Table Bay in northerly gales have sea-room, a weather current, and the lee of high land at their option, fourteen miles off. To turn Table Bay into a lee shore, in the thick weather of northers would be culpable, except crippled, particularly for the hazardous operation of coming to anchor in a gale under a low wall where the berths might be forestalled; the ground perhaps filled by experienced, hence scattered coasters. While the lull, which precedes these gales, argues ill for the power to obey the dictates of the weather-glass, even were the refuge unexceptionable.

All refuge from the enemy he admits, is to be achieved by a hopeful breakwater battery, where a broadside might "singe their whiskers," for the idea of defending shipping by a squadron sword in hand, superior of course to the enemy in these seas, when the cheap shore defences would protect them in the adjoining Bay, couples well with the apprehended bombardment of Cape Town by some new Vauban, across a gale of wind, which would keep the royal navy in Simons Port, fourteen miles to windward, for it is scarcely worth notice that the wind which keeps one in, must keep the other out. The last Harbour Committee reported the non-working days in Table Bay to be seventy, now uninterrupted intercourse is an essential to a naval arsenal, and the proposed work would not remedy a south-easterly defect. The present rates of insurance to the capital will not deter vessels with cargo, and as a patent slip would require other protective expenses, (superfluous to its rival in the adjoining bay,) the proposed port at an annual outlay of one fifth of the present colonial revenue, and ultimately of two millions of pounds sterling, is to be a lure to refreshers in four winter months. While the periodical press of the capital sets forth the somewhat transparent abolition of the aforesaid port dues, as "important to the world," and declares the Cape *Pension del' Univers à bon marché*, Capt. Bance proposes his breakwater, or extra ground tackle to be requisite for security from the elements and from the enemy. The present able rulers should place the true qualities of the colonial Bays beyond dispute, and if there is to be preference of patronage, it should be accorded to the best with the *first* surplus revenue. It is in their power to execute works for promoting the most advantageous description at demand, viz. that of maritime visitors, and a state paper to warrant a great expenditure which reacts on these customers should contain

1st—The number and tonnage of vessels which annually double the Cape;

2nd—The monthly arrivals in each bay, (exclusive of coasters,) days' stay, distinguishing those with cargo or crippled;

3rd—The number actually present when wrecks, strandings, or damages through driving occurred, with the loss and expense to the trade;

4th—The number wrecked or stranded in the approaches, with the expense incurred;

5th—The tonnage and value of imports and exports, rates of freight and of passage-money, with number of passengers;

6th—Expenses of landing and shipping cargo and of detention through non-working days; and the question for decision does not lie in fallacious comparisons between Table Bay and distant regions, where lucrative trade without an alternative warrants great risks, but between it and a nearly adjoining port equi-distant from the exporting producers or Saldanha Bay. If the result of such a state paper shews an indirect tax upon the trade of the colony of tens of thousands per annum in any one port to be mainly avoided at a small expense in another, it is obviously the interest of the colonists at large, to have the better port placed fairly on its legs for competition. The very imperfect aspect of that result at present stands thus:—

A board appointed by Government in 1836 reported that owing to detention and *charges for transport arising through the distance from the anchorage to the landing place*, the loss to commerce in Table Bay was £25,000 per annum, and the self-admitted profits of the Port Captain, as laid on the council table lately, argue £5,000 per annum for anchors and cables. Here, exclusive of wrecks and damages are £30,000 per annum, while H.M. Customs, now producing nearly half the revenue of the colony are £64,000 only!!!

This is sufficient to shew that the subject of a port is worthy of attention. Where the legislative power is nominated by the executive, the people look to the latter, and to distinguish an inferior Bay by patronage of public money and totally to neglect a superior port is short comings to the colonists, to the revenue, and to the British exchequer, argues inferior intellect in the rulers, or a very questionable deference for the superior vested interests, (begotten by an obsolete state of naval architecture only calculated to sail off the wind) and employed like the dog in the manger in a short sighted depression of a rival shop. From competitors in trade everything legal may be anticipated, but it is really shocking to read that an executive councillor should assert in council that there were only two ports in the colony. His test was the amount of customs raised. By this mode of argument Liverpool was no port to a Bristolian fifty years since!

No sophistry can explain away numerous comparative disasters, it signifies little whether they be caused by exposure to the wind, to the swell of a vast ocean, to bad ground, to current in deep water, or to *mirage*.

The last accidents are all consistently attributed to insurance villainy, but when occurring near a lighthouse where *life* was endangered, probability is entirely against the assumption. From recent alterations in the Tariff on Foreign Provisions, it is believed that vessels can be provisioned at the Cape throughout, as cheaply as in any place in the British empire, and the subject of a good port should be urged by the body of merchants and shipowners on the attention of the Prime Minister. Every wreck and unnecessary charge on trade figures a deficiency to the Chancellor of the Exchequer, and if it be alleged that, because some wrecks are inevitable, the question may be safely left to itself, the reasoning equally applies to human life; death being inevitable, precautions to preserve health are next to useless. The inju

rious paragraph of Captain Bance, that Simons Bay is a leeward port eight months in the year, has alone called forth these remarks; and it is maintained that the prevailing winds and currents render Simons port the *weather position* throughout the year of the whole of the Cape Colony; but as self satisfied assertions are mere moonshine to the public, space is solicited for a somewhat detailed analysis of the grounds of that opinion, while it is hoped that "pressure from without" will afford the Governor of a Crown Colony a graceful opportunity to execute some unpopular works in its favor, apparently *malgré lui*.

The desiderata for a *perfect port* are humbly conceived to be: First,—Safety from the wind and from the sea, with capacity. Secondly, safety from the enemy. Thirdly, safety of approaches. Fourthly, easy to enter and to depart. Fifthly, abundance of water and cheap supplies. Sixthly, a weather position for war.

The regular land and sea breezes of the tropics, alone exalt a port with a single mouth like a bottle for general purposes; when protection from the enemy exists without a narrow entrance, it is not desirable, obviously involving expenses on trade and, with a strong tide, danger.

Notwithstanding Capt. Bance's assertions to the contrary, it is maintained that the Cape possesses in Simon's Port a harbour which requires but little assistance from art, to combine the above points in a very unusual degree. The evidence of an adversary the late talented Comptroller of H.M. Customs, Wilberforce Bird, is preferred, who in a published work says truly, "This bay though it is hardly justice to call it so, is safe and secure at all seasons. Two batteries command the entrance and the anchorage which may be compared to a bow, with the line extended from battery to battery which could throw shot into each other. In 1807 Admirals Stopford and Stirling lay there with fifty-three sail of men-of-war (three of the line) and transports, all within the string of the bow, and landlocked." In the month of October a celebrated gale from the south-east came on, since known as "the October gale," it destroyed a vintage and caused the Government to issue loans to the sufferers. No damage was sustained by the above fleet and five detained neutrals in Simons Port. While in Table Bay, the weather shore, the H.C. ships Wexford and Warley were driven to sea with three anchors ahead, and great damage was sustained by the shipping there. The late conscientious Sir Jahbel Brenton after years of experience, "never saw a day when, an anchor and cable could not have been sent off to a vessel in Simons Bay if it had ever been necessary." Finally there never has been a vessel wrecked by accident.

Here is the first point, safety from wind and sea, and great capacity. Within the bow an enemy could be raked in every position from the water's edge, by any number of guns in temporary works with impunity, if there were a fortified position on the adjoining height to cover the rear of these lines and the present open defences; a project entertained by that distinguished soldier Sir Lowry Cole. Beyond a *coup de main* for mischief the Cape peninsula is obviously a dependency of the sceptre of the ocean. It is neither worth capture or keep, or tenable by another power. A merely distructive enemy would hesitate to run into False Bay, where a squadron rounding the Cape might catch him like a rat in a trap, and approach in northerly winds is fatal to surprise

except from steam, against which the defences of Simons Port could be rendered most formidable; batteries on the corner of Noahs Ark would complete a circle of mutually supported defences with the *ricochets* of a mill pond. In war, with weak convoy, fleets would doubtless assemble there because there is safety from the enemy; the second point.

False Bay is so called because vessels from the eastward have mistaken Hanglip for the true Cape, very dissimilar and never capped, and imagining themselves in the ocean and neglecting the lead, have run in the night on the shallow sandy beach at the bottom of False Bay. This is no impeachment of the approaches to Simons Port, which dictate that appeal to the lead which from the gradually decreasing depth of water, must have averted these calamities. The bold, imposing character of the land which adjoins Cape point sometimes causes the distance to Simons Port to be overrated which is a mere question of time. There has been only one wreck in thirty years entering at noon-day in fine weather on a rock forming one extreme point of Simons Bay, since buoyed. The Royal sea officers evidently hold False Bay safe for them, or a lighthouse would have been long since erected. One is now in contemplation at Millers point just inside the Cape, it will form a capital beacon to enable strangers at night to keep their port under their lee in security, while those acquainted with the place can run in boldly for refuge, for which alone harbour lights should be encouraged. The remarkable success of the lighthouse in Table Bay, since bolstered up by a second, doubtless dictated Capt. Bance's recommendation of the Roman rock, for the site. In the past year 1843, ninety-three vessels entered Simons Port of 56,166 tons, without a single charge on them, through accident or stress of weather. These together argue the 3rd point, safety of approaches.

The superiority of Simons Port for entry is not disputed, but it is artfully alleged by its rivals in Table Bay, that departure is impracticable in south-easterly winds, which, reserving those days when canvas cannot be spread, is equally applicable to Table Bay and comparatively to all ports, is flatly denied. Experience shows that, with an exception now and then, the violent south-easters last three days, and that they amount altogether to the sixty days which cut off intercourse in Table Bay, or to one day in four during the summer.

Excepting these days the south-easters present no obstacles to her Majesty's ships, and merchant vessels only need energy and a little assistance to berth their anchors, and make sail. When under way they have room for boards of from twelve to twenty miles partially protected from sea by the high land to windward. Assuming the worst, that the wind is dead foul that the vessel sails seven knots, and weathers the usual one-fourth, here is about seven and a half hours' work to make the thirteen miles to weather the Cape, very frequently done on the second board. Dull vessels with energetic commanders have repeatedly quitted Simons Port at daylight under double-reefed top-sails, and have been to the southward of the Cape before noon; there is a strong set out of the bay in a particular line.

The first comparative difference which presents itself between Table Bay and Simons Bay in south-east winds is, that vessels must beat very nearly the same distance into the former, or out of the latter. In

one case they must take the wind at hazard ; for sixty days it is clear that they cannot get in, or are certain of the expensive wear and tear of a gale, or its detention through non-working days, not to dwell more particularly on the numerous accidents in entering. On the other hand they can run into Simons Port with a fair wind, equipment may immediately commence, and they can choose the strength of their wind in departing. The south-easters generally freshen gradually, and with promptitude, the strongest may be avoided, while no danger attends the attempt to get out; but False Bay possesses a natural advantage over its rival, which it is hoped will be rendered available to its navigation with more general certainty, if this meet the eye of the valuable head of that department. The tide sets in and out in the direction of south-easterly winds, and a series of observations on the set would determine the line for the strength of the stream, whose velocity out is evidently very strong when the south-easters press an unusual quantity of water into False Bay. In light winds strangers could tide it with a stream anchor.

It is allowed that there has not been a single accident in departing from Simons Port for thirty years. The judicious alterations in the national tonnage duties, and the improvements still progressing in naval architecture, and the efficiency of the mercantile marine, gradually improve its pace. With now no reverse interest, there will be, in a few years, little difference between the beast of burthen and the racer, to which, now, a beat of thirteen miles to windward in smooth water is a *bagatelle*, and the aforesaid objection to Simons Port is disappearing altogether. Here is the fourth point, easy to enter throughout the year, and comparatively easy with ports in general to depart in south-easterly or foul winds.

There is an abundance of excellent water, and an artificial barrier would increase it *ad infinitum*. To say little of the waste in other quarters, there is one unfailing spring of superior water near the north battery running neglected into the sea, which with a reservoir would supply the whole British navy. The produce of the farms in the vicinity commonly finds its way to the capital in the absence of sufficient demand while there is abundance of uncultivated garden ground. The completion of four gaps in the main road amounting to 2,700 yards only on a dead level, with the materials close at hand, presenting no engineering obstacles, and estimated by an Australian engineer to cost 20*s*. per yard, would perfect the communication with the capital, and with the exporting districts, and place it fairly on its legs for cheapness, colonial and foreign ; for as these gaps double the expense of carriage to and from the capital, they prevent small importations direct to Simons Town, from the expense of transporting the surplus to the other market. The difference is now trifling to mere refreshers about 30*s*. on each ton weight, and except as a question of direct importation and export is scarcely worth notice when contrasted with the expenses in the other bay. But independent of land carriage, Wilberforce Bird says truly ;—The site of this country, Gordon Bay in the opposite corner of False Bay, through which every thing from the eastern interior passes to the capital (say forty miles off,) gives an opportunity of purchasing produce to any extent, and Simons Port, (twenty-four miles,) could re-

ceive its supplies by sea carriage, The demand for export would realize this observation, and a complete road would produce a free competition, the very soul of cheapness recognized by the rulers as desirable to the Cape half-way house in the abolition of port-dues. The completion of this insignificant piece of road would place Simons Port fairly on a par with any other place in the colony as to cheapness. From competitors in trade every thing legal may be expected, and the alleged reply of an unofficial legislator, when requested to support the petition for this road was consistent and natural from a merchant:—"Pray, sir, do you wish us to shut up shop in Cape Town?" But it is really shocking to read that a person should have asserted in council, that a suspension bridge would be necessary to establish the communication between Cape Town and Simons Port, only a few weeks subsequent to a sort of public festival at the opening of a piece of road at the Salt River, laid down at comparatively small expense on far worse ground (in fact, on what has swallowed up people,) than any which the beaten track to Simons Port presents. If impartiality is to be expected between clashing mercantile interests, here it should come from the executive council, and it is to be hoped that an inquiry will be instituted into the perquisites of this road, before the advocacy of Cape Town merchants for increase of salary to him is complied with; an advocacy which has been aptly termed "a provision by the mice for the cat."

Sixthly, outside of both Table and False Bay the ocean current sets northerly which constitutes Simons Port the weather position of the colony. Wilberforce Bird says truly "From Table Bay to Simons Port the voyage is called forty-eight hours, yet such may be the difficulty of weathering this point of land that vessels have been more than a month on the passage" a week is the common passage for merchantmen. In April 1807 Admiral Stopford anchored his fleet of nearly seventy sail in Table Bay within twenty-four hours after the order had been issued in Simons Bay. It is clearly impossible to reverse this and one who inspects the charts with the prevailing winds and ocean current must see at a glance that here is the sixth point, a weather position for war.

The question which will naturally arise in an unprejudiced mind is, if Simons Port, unquestionably more healthy and equi-distant from the exporting districts, be really the port described, how can it be destitute of assistance from art? Mainly through naval architecture. The Dutch vessels of the day built to navigate the shallows of Holland or to repose awhile on its banks are admirably described by Irving in Knickerbocker. Their only point of sailing was off the wind, hence, independent of other considerations Simons Port was forbidden ground to them eight months in the south-east season, Table Bay four months in the north-west. The latter begat the stronger vested interest whose wealth interest and connection has been naturally employed in depressing the rival shop to the great injury of the mass of the colonists; and the rulers of the colony are now for the first time in command of a surplus revenue.

This is human nature, and might be colonially incurable where the absence of a primogeniture law impedes the accumulation of capital for private enterprise, if the legislative power were not nominated by the executive. A practical piece of satire on the road is to be found

in the fact that, while Cape wheat and wheaten flour, the best in the world, figure among the exports from Table Bay, the Queen's Naval Arsenal has received its biscuits from England, the freight from which equals the land carriage for twenty-two miles. Far be it from us to instil anything like discontent. The Cape has very much to be thankful for, but when hundreds perhaps thousands of vessels pass it altogether homeward bound right in their path for another roadside inn scarcely to be termed agricultural and ostensibly dearer, one is disposed to search the causes. One, undoubtedly, is disapproval of its ports to which every facility for open and fair competition should be supplied by enlightened rulers.

British policy may be, perhaps, opposed to the elevation of the Cape into an entrepôt for the East, into a second Venice, through open p les as ship jetties; if it is not, it is clear that if the landing and shipping cargo could be reduced far beneath the difference between building and navigating two vessels of 500 tons and one of 1000, that the former would be the preferable mode of conducting the trade. It would increase competition by introducing smaller capitalists, for the quicker return with the trade would reduce the risk of insurance, by multiplying the bottoms, would improve the nursery for seamen, by substituting the smaller vessel and shorter voyage, and would introduce British Capital to the Cape, to conduct a trade of assorted cargoes from the east. At 300 yards from the shore at Simons Port a vessel of 500 tons, drawing 18 feet water, could discharge her whole cargo on a jetty, while frigates of 1,500 tons lie within pistol shot. With moorings head and stern they could lie in tiers, in as much security as in the river Thames, and discharge without the expensive intervention of boats. Natal certainly, and other nooks, require an Entrepôt with this convenience; docks would never answer on sand. If a jetty of this nature at a cost of 3000*l.* had been in existence, the saving effected on the landing of 2,700 tons of coals for the Queen's steamers in the last twelve months would have paid the interest and wear and tear.

On a station when damage to the sheathing is attended by ravages from the worm, a patent slip would be a very useful appendage to the Naval Arsenal; men of war have been sent home to be docked; a frigate lies in Simons Bay now which has been ashore for 36 hours,—the interest, and wear, and tear, would be willingly paid by merchant ships in the absence of a mercantile rival.

Finally, to place Simons Port fairly on its legs, naturally and artificially one of the best ports in the world, it requires:—

1st—The completion of the main road say	£4,000
2nd—A ships' jetty and moorings	5,000
3rd—The lighthouse at Millers' point.	
4th—A patent slip.	
5th—A Queen's warehouse.	
6th—A citadel.	

And these things require only "pressure from without";—it is a national question.

A Word to the Caterer on Edwards' Preserved Potato.

That our favourable opinion has long since been given on Messrs. Edwards' preparation of that excellent vegetable the Potato, is well known to the readers of the *Nautical*, and as these gentlemen are anxious to speak for themselves on its merits, it is but giving them fair play to allow them to do so. We therefore annex a string of recommendations, which well considered, prove its value, and should remove all prejudice, and open the hearts of all caterers of officers' and other messes.

Since writing the notice in page 742, we have been informed that the Preserved Potato is packed in *Metal* Cases, which keep it dry anywhere, and for any time; and we therefore consider that we are performing a service to our readers in laying before them the following statements:—

The Patentees of the Preserved Potato solicit particular attention to the anne xed Professors Certificates, Government Special Reports, &c. shewing, the important advantages of the Potato in a preserved state, for Ship's or Military Stores, for general domestic use, or for exportation to climates and situations, where that most desirable and nutritious Vegetable,—the Potato—is not obtainable, or only of an inferior growth or deteriorated state. The Patent Preserved Potato *possesses the inestimable property of keeping uninjured in any climate for any period*; proving an immense advantage over Potatoes in the natural state; which, on being stowed in bulk, incipient vegetation almost immediately ensues; causing a rapid loss in weight, and quickly rendering this valuable root positively unwholesome and unfit for food.

The Preserved Potato is prepared from the finest Potatoes, selected at that particular season when they possess most largely the farinaceous or nutritive principle, which it retains, unimpaired by time or climate, and all the flavour and wholesome properties of the vegetable when in its best state; this is authenticated by the Certificates of Professors Brande, Daniell, Dr. Paris, &c.; and more particulary by the chemical Analysis by Dr. Ure, Professor of Chemistry, &c.

"*I hereby certify that Messrs. Edwards' Patent Preserved Potato, contains by Chemical Analysis the whole nutritious principles of that root in a pure concentrated state; that it contains.*

60 *parts in the hundred, at least of starch; nearly*
30 *of a soluble fibrine of demulcent antiscorbutic quality*
5 *of a vegetable albumine of the nature somewhat of the white of egg, and*
5 *of a lubricating gum.*

The fibrine and albumine render it more light of digestion, and the gum more demulcent to the stomach than wheat flour, with which, also, it may be regarded as nearly equally nutritious, and more so than peas, beans, sago, or arrow root.

July 30th, 1842. ANDREW URE, M.D., F.R.S.

Under the conviction of an extensive general demand, the Patentees offer it at a price, (delivered in London,) that as the cooked vegetable does not exceed One Penny per pound.

The Patent Preserved Potato is packed in 1 Cwt. Metal Cases, (3 feet 2 inches solid,) containing in its concentrated state, the equivalent of 5 Cwt. of Vegetable.

NB. For Cash on delivery.]

D. & H. EDWARDS' & Co., Patentees,

1, Bishopsgate Street, corner of Leadenhall Street, London.

Samples and Particulars to be had at the Patentees' offices, of the principal Provision Merchants, the Agents at the out-ports of the United Kingdom, also in the East and West Indies, Colonies, &c., &c.

From Professor Daniell, F.R.S., *King's College.*

Gentlemen.—I have carefully examined the several specimens of your Patent Preserved Potato, which you left with me, and have also read and considered the specification of your Patent, and have not the least hesitation in certifying, that it is a wholesome and agreeable preparation of the nutritious parts of the root, not distinguishable in flavor from fresh and well boiled mealy Potatoes. I found no difference between the old and new samples.

If the directions of your specification are carefully followed, I have no doubt that the preparation will preserve its flavor and nutritious properties, in dry packages, for any length of time. When cooked as you direct, I find that the grains swell very much, and when of the usual consistence of well mashed Potatoes, that they have increased in weight from 1*lb.* to 4½*lbs.*

Messrs. Edwards & Co. J. F. DANIELL.

From Dr. Ure, F.R.S., *Professor of Chemistry.*

Messrs. Edwards' process for concentrating the nutritious powers of Potatoes, and preserving their qualities unimpaired for any length of time, and in any climate, is, in my opinion, the best hitherto devised for that purpose, and chemically considered, the best possible.

I find that one pound of their Patent Potato, when cooked with about three pounds of water, affords a dish equal to a mash of fresh mealy Potatoes. When milk is used instead of water, then a much richer dish is obtained than can be formed from the best ordinary Potatoes boiled, because it is free from the water contained in fresh Potatoes, amounting to fully three-fourths of the weight. By adding eggs, sugar, and spices, to the milky mash, a delicious pudding may be made. Edwards' Patent Potato will be found an invaluable preparation, not only in sea voyages and tropical countries, but at home in the after part of the season, because it continues uniformly wholesome and agreeable, whereas by this time our Potatoes have become unsound from frost, growth, &c. It also possesses all the antiscorbutic properties of the fresh Potato.

ANDREW URE, M.D.

From Professor Brande, F.R.S., *Royal Institution.*

I have examined Messrs. Edwards and Company's Patent Preserved Potato, and am of opinion, that it is a convenient and unexceptionable article, and consists only of the pure vegetable, without any foreign admixture or colouring matter; that with common precaution it may be kept for any length of time, without liability to decay or change; and that its comparative nutritive powers are to those of the fresh Potato as about four to one—one pound of the Preserved Potato being the equivalent of about four pounds of the best fresh Potatoes.

WILLIAM THOMAS BRANDE.

From Dr. Paris, F.R.S., *President of the Royal College of Physicians, Author of the celebrated Treatise on Diet, &c.*

I have cooked some of the Patent Potato of Messrs. Edwards', and I consider it a very good substitute for the fresh root.

J. A. PARIS.

From A. S. Taylor, Esq., Lecturer on Chemistry, Guy's Hospital.

I have examined the Patent Preserved Potato sent to me by Messrs. Edwards, and beg to certify that it contains all the nutritious properties of that vegetable, and that, in my opinion, it is well adapted to serve as an article of food.

ALFRED S. TAYLOR.

MEMO.—The Patent Preserved Potato having been tested and analyzed at Sydney, after the voyage from England, by the celebrated Dr. Bennet; he certifies that its nutritious and antiscorbutic qualities correspond in every respect with the analysis made by Dr. Ure.

Special Reports as required by, and made to, Her Majesty's Government, etc., etc.

Special Report on the Patent Preserved Potato, required by Dr. Gordon's letter May 20, 1842, for the Army Medical Department.

The Preserved Potato of Edwards and Co. was this day treated according to the printed directions contained in each bag, and was then tasted by each of the undersigned, as well as by many other persons, (Medical Officers and patients in the hospital,) and all were of opinion, that the preparation, as far as they could discover, retained all the virtues of fresh potatoes, and was not less palatable.

The Board therefore consider the preparation as affording a most valuable article of diet, and are of opinion that it might be advantageously adopted as a portion of the ration of Soldiers proceeding on board ship to foreign stations.

In the event of its not being considered necessary by the Authorities to adopt it generally, they would particularly recommend that a quantity of it should be regularly put on board ships conveying troops, in order to be issued to such sick as the Medical officers in charge might consider it better adapted than the articles of diet which it has hitherto been customary to substitute for salt provisions.

(Signed) Andrew Smith, M.D., P.M.O.
J. Kinnis, M.D., Staff Surgeon.
R. Dowse, Staff Surgeon, 2nd C^L^

General Hospital, Fort Pitt, 5th June, 1842.

(From the Right Hon. the Lords Commissioners of the Admiralty.)

Extract of Special Report on the Patent Preserved Potato from Dr. Wilson, Inspector of Hospitals, &c., dated on board H.M. Hospital ship Minden, at Chusan, 17th April, 1843, *and addressed to Vice-Admiral Sir W. Parker, Commander-in-Chief in China and the East Indies.*

Respecting their general merits as an article of ration, I express the opinion, so far as I have had the means of judging, that they possess valuable qualities, they have the general characteristic of containing a large portion of nutriment, are easily cooked, and which is of much consequence as an article of diet, are palatable.

Extract of Special Report to Sir James McGrigor, Director-General Army Medical Department, London, dated Barbadoes, 19th April, 1843.

Sir.—I have tasted the Potato, and I agree with the Certificates sent, that the preparation is wholesome and pleasant to the taste, and I have ascertained by frequent inquiry in the hospitals, that the patients prefer this preparation to sweet potatoes, and to the yams they usually receive, and I am of opinion that for sea stock for the troops serving in this command, and for use in hospitals, when vegetables are scarce and dear, it would be useful and acceptable in this command.

(Signed) H. Bone, M.D.,
Inspector-General of Hospitals.

Special Report to Staff-Surgeon Birrell, M.D., P.M.O., *dated Barbadoes, Sept.* 15, 1843.

Sir.—Agreeable to the circular received from Dr. Bone, Inspector-General, dated Aug. 1st, 1843, in reference to the Preserved Potato, I have the honour of reporting, that when in charge of the detachment hospital, 33rd regt., I used that preparation to a considerable extent, and consider it nutritious, very palatable, and retaining most of the virtues of the fresh vegetable. All the patients of the 33rd and 46th regts. in hospital, (with only a chance solitary exception) preferred the Preserved Potato, to either yams or sweet potatoes.

I therefore beg leave to say that, in my opinion, the Preserved Potato, would be a desirable substitute in the Military hospitals in this command, in place of yams, sweet potatoes, or plaintains.

(Signed) Thomas Fox, M.D.

Special Report to Dr. Bone, Inspector-General of Hospitals, dated Demerara April 30th, 1844.

I have the honour to state that the Preserved Potato as prepared by Edwards and Co., sent for the use of the sick in hospitals at this station, was, when treated according to the printed directions which accompanied it, considered in every respect equal to the fresh potatoes, indeed far superior in point of flavour to what is usually imported into this colony, which rarely continues in a fit state for use for more than three or four weeks, whereas the Preserved of Edwards and Co., retain the virtue of the fresh potatoes any length of time.

I am of opinion that it might be advantageously used in the hospitals in this Colony, and at a cheaper rate than either fresh potatoes, yams, or plantains.

(Signed) C. MACLEAN, M.D.

Report from Dr. Myers, M.R.C.S., *Surgeon-superintendent of Emigrant ship, "Elizabeth," dated Sydney, 1st May,* 1844.

Gentlemen.—I have much pleasure in bearing testimony in favour of your Preserved Potato, having had ample opportunities of testing it during my voyage to this place.

It is UNDOUBTEDLY an EXCELLENT article of diet, being highly nutritious and anti-scorbutic, and so easily cooked, that I cannot TOO STRONGLY recommend it being placed on the Victualling scale of all Emigrant and Troop ships, proceeding on long voyages.

The Emigrants under my charge were EXTREMELY FOND of it, and frequently declared, it was the best article of diet they got on board, many of them giving it the preference over the fresh vegetable.

Trusting your invaluable invention may receive the patronage it so eminently deserves.

(Signed) G. MYERS, M.R.C.S.

Special Report on the Preserved Potato, to Dr. Hacket, Deputy Inspector-General of Hospitals, dated Jamaica, Sept. 5th, 1843.

A supply of 56lbs. of the above Vegetable, was received at Regimental Hospital, of 2nd battalion, 60 R. Rifles, stationed at Newcastle, for a trial, about the beginning of September, 1843, the whole of which was issued to the patients there under treatment; they were found to be of the greatest service possible, as at that time few of the common vegetables of the country were in season, and those few that were exposed in our market for sale were not sufficiently ripe and dry to be issued with safety to the patients. They appeared to agree with the men, and were very much appreciated by them; another advantage was the facility of issuing them hot to the patients, which never could be accomplished with the yams or cocoas.

I am of a firm opinion that the above-mentioned vegetable would prove a most valuable article in the formation of Hospital diet, especially on the stations where there is often a difficulty in obtaining dry wholesome yams.

(Signed) J. T. RICHARDSON,
Assistant-Surgeon, 2nd 60 Rifles.

Letter from Her Majesty's Office of Ordnance, London, 28th Nov., 1842.

Gentlemen.—With reference to your letter dated 16th inst. transmitting for the consideration of the Board of Ordnance samples of Patent Preserved Potato, I have their commands to acquaint you they have received from their Medical Officer a favourable report of the preparation which you have submitted, and that application will be made to you for a supply of the article should it be found requisite for the Ordnance Service.

(Signed) R. BYHAM.

Special Report to the Deputy Adjutant-General, dated Barbados, 21st Aug., 1843.

Sir.—I have the honor to acknowledge the receipt of your letter 19th inst., together with a sample of Preserved Potato, and beg to acquaint you that I am of opinion that it would be desirable if the troops in this command could obtain this article, (at the low price mentioned,) as a substitute for potatoes and yams daily purchased by the men, more particularly at stations where vegetables are scarce.

(Signed) Donald Stewart,
Capt. and Major of Brigade

Extract of Special Report to Dr. Bone, Inspector-General of Hospitals, dated Barbados, 22nd August, 1843

Sir—I have had the honor to receive the sample of Preserved Potato sent to me as commandant of the troops in this garrison, and requesting my opinion in duplicate, relative to the expediency of giving this preparation to the troops in lieu of sweet potatoes, yams or plantains. I beg to state the samples sent in the form of its convenient packages in my opinion would be a desirable addition to the food of troops in the West Indies, especially in voyages, and during long droughts when vegetables are both scarce and inferior in quality.

(Signed) Thomas Moody,
Lieut.-Col. Commanding Royal Engineers, West Indies, Senior Officer of the Troops.

Special Report to the Deputy-Adjutant-General, &c., Barbados, Aug. 23rd, 1844.

I have the honor to report to you for the information of his Excellency the Lieut. Gen. commanding the Forces, that the generality of the men of the detachment 33rd Regiment, at present under my command, prefer the sample of the Preserved Potato to the vegetables usually found them, and which, in my opinion, will be far more beneficial and economical to the men themselves, than the present way of procuring vegetables, which are for the most part sweet potatoes.

(Signed) H. K. Erskine,
Captain 33rd Regiment, commanding detachment.

Extract of Special Report to Lieut.-Col. Hart, Deputy-Adjutant-General, Barbados, 15th Aug. 1843.

Sir.—I do myself the honor to report for the information of his Excellency the Lieut.-Gen. commanding the Forces, that having had the sample of Preserved Potato received from you, prepared according to the directions given, I gave a portion of it to the men of the detatchment 3rd W. I. regiment, under my command, who expressed themselves generally to the effect, that it was equal, if not superior to the sweet potato now daily used by the men, and I am myself of opinion that it may form a desirable substitute for that vegetable.

(Signed) W. M. Mills,
Capt. commanding detachment, 3rd W. I. regiment.

Extract of Special Report from Head Quarters, St. Helena, 17th June, 1844.

Having seen the advertisement of Mr. Edwards' Potato, I sent to England for a cask containing one cwt., with a view that should it answer my expectations to order a quantity to supply the Royal Artillery, in case of either a scarcity or an exorbitant price. The whole of which, except what I gave as trials, was consumed at my own table, and fully answered the purpose of mashed potatoes, and after the first or second trial, we did not know it to be Prepared Potato : I have had the prepared and the unprepared at the same table, and unless our notice was particularly called to it, would not have known one from the other. Potatoes are always dear here.

(Signed) Hamelin Trelawney,
Colonel commanding the Troops.

Special Report to Her Majesty's Colonial Land and Emigration Commissioners.

Extract of the Journal of Neil Campbell, Esq. Surgeon-superintendant of Emigrant ship, "King William," Van Dieman's Land, Dec 17th, 1842.

This day I gave the Preserved Potato a second trial; having tried the experiment with the Preserved Potato yesterday, and found the requisite quantity of water to sufficiently cook them, I superintended the serving out of the water to-day, and I find that for a mess of six persons, 1½lbs. of Preserved Potato was quite sufficient, to which I added 4¼ pints of boiling water, and that made it of the consistency of mashed potato; the people enjoyed it very much to-day, and I intend to serve out this excellent preparation, twice a week to them. It is a very superior article, and very nutritious, and I would recommend it for Emigrant ships in particular, it being a preparation which may be made use of in all climates, and in a few minutes made ready for use; nothing ought to be added or taken from the quantity I have mentioned above, or at least it ought to be added in the same proportions.

I have given it a trial at the cabin table, and the passengers prefer it to the other potatoes used in the cabin, it having been made palatable to-day by my experiments.

Extract of Special Report from Dr. Williams, as required by the Inspector-General's letter of August 1st, 1843.

This preparation has been in use in the hospital of the 59th regiment since 6th August last, issued at the rate of 2 ounces of the Preserved Potato for each low and half diet. It has been generally cooked as directed in the printed instructions, viz., by the addition of boiling water, in the proportion of somewhat more than a quart of water to each pound of the Preserved Potato.

From my experience of its use during this short period, I am disposed to think that it retains in a large degree, the nutritious properties of the fresh potato, and that it is perfectly free from any irritating effects on the stomach and bowels, I therefore think it will become a most valuable article of the soldiers diet on long voyages, as a substitute for, or in addition to, articles hitherto issued under such circumstances, and that it will materially assist in securing exemption from affections incidental to long voyages, and the protracted use of salt provisions.

(Signed) T. Williams, m.d.,
Surgeon 59th regt. Barbados.

Extract of Special Report from Dr. Birrell, on Patent Preserved Potato, dated 17th Sept. 1843, *St. Ann's, Barbados, to Dr. Bone, Inspector-General of Hospitals.*

Sir.—I have the honor to forward the reports of Dr. Williams 59th regt., and of Staff-Surgeon, Dr. Fox, on the Preserved Potato, agreeably to your circular of 1st ulto.

In forwarding these documents, I have to state my opinion that the preparation in question possesses to a great degree the nutritious quality of the fresh potato, that it is of a mild nature, causing no irritating effects, and is therefore well adapted as an article of diet to any kind of patient in hospital, in the convalescent stage.

I do not think that it should supersede altogether the use of the fresh vegetables of this country, but there can be no doubt that it is a desideratum of great importance to have at our ready disposal, such a preparation as the one in question, as affording a change or variety from the usual vegetables of the country, and at certain periods of the year, and at some stations such as Antigua, &c., forming a substitute for fresh vegetables when the latter are scarce, and high priced, and the utility of this preparation must be still more highly appreciated in long voyages, when the soldiers' diet is confined to salt provisions.

(Signed) Wm. Birrell, m.d., *Surgeon to the Forces.*

Extract of Letter from Major H. S. Davis, 52nd Regiment, Berbice.

The Officers of the 52nd Regiment have tried the Patent Potato sent by Mr. Tomkins, of Cork, to Captain Pitcairne, and consider them very good, and an excellent substitute for Potatoes.

(Signed) H. S. Davis, *Major Commanding.*

Letter from Dr. Allan, H.M.S. Rattlesnake.

Gentlemen.—I have much pleasure in adding my testimony to the excellence of your Preserved Potato, as a wholesome and nutritious article of diet.

A large quantity of it having been sent on board H.M.S. Rattlesnake, for the use of invalids under my charge on their passage from China to England, it was issued daily in the absence of fresh provisions, and so far as my observation goes, I consider it a very valuable addition to the list of articles usually issued to the sick on board Her Majesty's ships as a substitute with salt provisions.

JAMES ALLAN.

Extract of letter from John Simpson, Esq., R.N., *Assist.-Surgeon, H.M.S. Blonde.*

Gentlemen.—I have great pleasure in informing you, that during my services in China, I have witnessed the most beneficial results from the use of your Preserved Potato; and would earnestly recommend it as a most valuable article of diet in ships going long voyages, especially in those carrying Invalids.

(Signed) JOHN SIMPSON, R.N.

Extract of a letter dated 21st February, 1842, Government House, St. John's, Newfoundland.

I am desired by Sir John Harvey to acquaint you, that besides distributing specimens of your Patent Potato to all the principal persons of this colony, samples have also been sent by his Excellency's direction to the editors of all the newspapers of this city, by which the merits of this invention has been highly extolled, and cannot, his Excellency hopes, fail in occasioning extensive orders.

His Excellency desires that you will send him by any direct conveyance, a barrel containing a couple of cwt. for the use of his own table, and include in the bill the supply already received, and the amount will be remitted you.

(Signed) F. W. HARVEY,
Private Secretary.

Extract of Special Report on two hundred weight of Patent Preserved Potato, of Messrs. Edwards & Co., London, sent out to Bermuda, and used in the hospital of the 1st and reserve Battalions, 20th regiment.

It appears to possess almost all the wholesome and nutritious properties of the fresh Potato, in general the patients in hospital relished it as well, if not much better, than the common potato, imported from Halifax, Newfoundland, or Prince Edward's Island. The imported potato being generally very much bruised from the tumbling and tossing consequent on loading, unloading, and carriage, as well as being exposed to the influence of the sun, wind and weather, becomes more or less oxidised, and frequently totally unfit for use, when cooked and brought to table; under such circumstances, I would recommend for the use of the troops in general the Patent Preserved Potato, which appears well adapted to keep, even in this humid climate, it could be issued from the Commissariat stores as well as any other article in the provision line.

(Signed) S. TEEVAN, M.D.,
Surgeon, 20th Regt. P.M.O.

Special Report on the Patent Preserved Potato, to Dr. Bone, Inspector-General, dated St. Ann's, Barbados, April 9th, 1844.

Sir.—In reply to your query as to the properties of the Preserved Potato, which has been made use of in the hospitals of this garrison, I have to state that I consider the preparation to be one which retains the qualities of the recent potato in a very perfect state. It is extremely palatable and nutritious, and but for a slight flavor, which is probably contracted from the tin in which it is packed, could scarcely be distinguished from the fresh vegetable.

In situations where recent potatoes cannot be obtained, I should consider this preparation to be a most valuable one.

(Signed) EDWARD BRADFORD,
Surgeon 23rd Royal Fusileers.

Extract of Special Report to the Deputy-Adj.-General, Barbadoes, 19th Aug., 1843.

I have the honor to acknowledge the receipt of your Commission dated 19th inst., and in reply, beg to inform you that I am of opinion that the Preserved Potato will prove a good substitute for the vegetables now used by the troops in this country. (Signed) N. Ovenden, *Major Com. 59th regiment.*

Extract of Special Report from F. G. Knowles, Commissariat, West Indies, to the Deputy-Adjutant-General, Barbados, 22nd August, 1843.

Sir.—I have the honor to acquaint you for the information of the Lieut.-Gen. commanding the Forces, that I have made trial of the Preserved Potato, and that I find them excellent, and, in my opinion retaining all the nutritive quality of the vegetable in its natural state." (Signed) F. G. Knowles, D.C.G.

Letter from James C. Melvill, Esq., Secretary to the Hon. the East India Company, dated August 3rd. 1843.

Gentlemen.—Having laid before the Court of Directors of the East India Company, your letters of the 8th of May last, and the 28th ult., I am commanded to acquaint you that the Court have *resolved that the Patent Potato shall be included in the scale of victualling for the troops* returning to England, and they have accordingly sent instructions to the Governments of the respective Presidencies of Fort William, Madras, and Bombay, that the above article, when procurable, is to be supplied by the owners of those ships, that may be engaged in India for the conveyance of troops and invalids to this country.

James C. Melvill.

Report from J. Welsh, Esq., Surgeon, East India ship "Northumberland," with Troops.

In compliance with the desire of the Hon. Court of Directors of the East India Company, I have the honor to report on the effects of a quantity of Edwards' Preserved Potato, sent on board the Northumberland, for the use of the troops on their passage to Madras. The Preserved Potato has been served out to the men twice a week for the last ten weeks, at the rate of 2½lbs. of the Preserved Potato, to 6½ pints of water, the allowance for a mess of six men; this was found quite sufficient and the men enjoyed it as much as the fresh vegetable. I followed up the directions of the Patentees with the first mess served out, allowing 3lbs. of the Preserved Potato to 6 pints of boiling water: I found this rather more than the men consumed, and the quantity of water too little to make the vegetable of the consistence of mashed potato. I substituted the following proportions, which made a much more consistent dish, and sufficient for six men, 2½lbs. of the Preserved Potato, and 6½ pints of boiling water poured over it, the vessel used was the mess bowl, covered with a platter, and allowed to stand for twelve minutes, when the mashed potato was produced, superior to what was made from the fresh vegetable on board.

The Preserved Potato has kept of the same quality throughout the passage, and I feel confident if protected from damp, it may be kept for any length of time without change. I consider Edwards' Preserved Potato a very valuable addition to the scale of victuals for the men, as it is equal in nutritious properties to the fresh vegetable, and as the men enjoy it as much, it must assist in keeping them in health.

(Signed) James Welsh, *Surgeon.*

Letter from H.M.S. Wilberforce, Niger Expedition, Ascension, January, 1842.

Gentlemen.—I feel pleasure in bearing testimony to the value of your preparation of Preserved Potato, which I have found serviceable in restoring the convalescents after the destructive fever, which has prevailed in the vessels of the Niger Expedition. I consider them to be a most valuable adjunct, from their highly nutritive properties, to the usual restoratives, made use of by invalids in all tropical climates, where the English potato must be esteemed a rarity.

M. Pritchett, M.D., *Surgeon.*

Letter from Capt. Trotter, Commander of Niger Expedition, to C. Croker, Esq. Admiralty.

I believe it was owing to your recommendation of the Preserved Potato, that I took it to sea, I should be obliged therefore, by your letting Messrs. Edwards' know how much reason I had to be pleased with the article, which I consider one of great valuo as a sea store.

I have brought a small quantity from the Niger, which is as good as when I took it from England twelve months ago. Dr. McWilliam, the surgeon of H.M.S. *Albert*, has, I understand, written to the proprietors of the Potato, expressing his approbation of its use for the sick on board a ship.

(Signed) H. D. Trotter, *Captain*, R.N.

Testimonial from Capt. W. Allen, R.N., *of H.M.S. Wilberforce, Niger Expedition.*

I am happy to be able to give you my testimony in favor of the Preserved Potato, which I found to be quite as good as the fresh vegetable, after having been on board H.M. steam-vessel Wilberforce more than a year, at least that which was packed in tin, I had some in barrels, which, owing to the excessive dampness of the coast of Africa, and, perhaps to carelessness in the exposure, had lost its colour, &c., though its nutritious qualities remained in a great degree. I would strongly recommend it to be always taken in metal cases, as the most economical way.

For ships' crews I think that the Preserved Potato would be found of great service, as part substitute for bread, it being usually the practice of the men not to take up the whole of their allowance, and to exchange it for *vegetables* in harbour, they would thus have the means of obtaining a good vegetable at sea.

I hope your excellent invention will receive extensive patronage, as you have enabled the longest voyager to have a supply of potatoes at all times, and in all climates.

(Signed) William Allen, R.N.

Letter to Mr. Best, Devonport, dated 16*th Sept.*, 1841, *from H.M.S. Cornwallis, Cape of Good Hope.*

The Preserved Potato has turned out an invaluable substitute for that most excellent vegetable on a voyage, be it long or short, and I cannot too strongly recommend it to your notice and recommendation of your numerous customers, both naval and military; Dr. King also speaks with the highest admiration and commendation of the Preserved Potato for the sick, and you are hereby authorised by him, the officers of H.M.S. Cornwallis, and myself in particular as caterer, to report this our unanimous opinion accordingly, to Edwards, and Co., the praiseworthy Patentees.

(Signed) James Uniacke, *Captain*, R.M.

Letter dated H.M.S. Cornwallis, Chusan, 6th Nov., 1842.

Although from the moment I first saw the Preserved Potato, I never had a doubt of its excellence, but deferred giving an opinion on the subject, until it had a fair trial, which has now been the case, it having been shipped nearly two years, and passed through every variety of climate—the summer months of China being particularly destructive to all kinds of stores; notwithstanding which, the Preserved Potato is not only good when opened, but by keeping it in canisters, remains so until all is used. His Excellency the Commander-in-chief, with most others in the expedition, have the Preserved Potato at this day; it being quite as good as when shipped; and as to the expense, I am satisfied it is more economical than the fresh potatoes, quantities of which always decay, and are thrown overboard. It is my intention, should I return to England in this ship, to bring home a small canister of the Patent Preserved Potato.

(Signed) W. Norman,
Steward to Vice-Admiral Sir W. Parker,
Commander-in-chief, China and East Indies.

From the Captain of the brig Vigilant, from Bombay, dated London, July, 1842.

I feel a pleasure in being able to forward the favorable result of your Patent Potato, for the benefit of shipmasters and passengers going long voyages, as an invaluable article of diet at sea or on shore, where the real potato cannot be obtained. During my voyage from London to the Mauritius and Bombay, I made use of your potato upon a very limited scale, and on my voyage homewards, (having a long passage,) slight symptoms of scurvy amongst the crew appeared, I immediately gave them your potato three times a week, and I am happy to say the result was most favourable, without the use of Medicine.

I arrived in the port of London with a healthy crew, not having a man off duty with sickness during eleven months, and I owe the greatest praise to your Patent Potato, and I can recommend it as the most economical article of food as possibly can be obtained, and at the same time affording an excellent dish, after being a voyage to India, not losing its quality, and only requiring ordinary precaution of being kept dry; and occupying a very small space.

George Clark, *Captain.*

To C. Croker, Esq., Admiralty, 26th October, 1841.

In reference to the Patent Potato grain which you gave me in November last, on the eve of my departure for the West Indies, in order to make a trial of its quality at distant dates and places, I have to state as follows:—

We tried one keg of it on board her Majesty's packet "Delight," the first of January of this year, shortly before we made Barbadoes; the quality was found most excellent, and was approved of by every passenger on board, of which the packet had as many as she could carry. I gave a keg to an acquaintance going to one of the Windward Islands, who subsequently tried, and found the quality equally good as the other.

(Signed) James McQueen.

From H.M. steam-vessel Wilberforce, off river Nun, Niger Expedition, dated August 14, 1841.

I have much pleasure in expressing the gratification of myself and messmates, in possessing such a portable luxury as your Preserved Potato. I do not hesitate to recommend it most strongly as a wholesome and agreeable article of diet, at sea especially; and I consider that climate will not affect it, since we have long had the atmosphere so damp, that the salt at table is almost a liquid, glue gives way, and boots and shoes become mouldy in 24 hours—yet the Preserved Potato comes daily to our table as perfect as when it left England. I think too, that it will be found economical. Wishing you the success which, from the comfort you have added to the voyagers few so well deserve,

(Signed) Cyrus Wakeham, *Purser.*

*** The above accompanies an order for a further supply of the Preserved Potato, to be sent out per the Bonny ships.

From Captain Case, of the Caledonia, from Sydney, Nov. 18th, 1843.

I have just arrived in the barque Caledonia, from Sydney, fifteen months out. On leaving England in August, 1842, I took a barrel of your Preserved Potato, which answered every purpose which you promised it should, it is a luxury at a trifling cost, an excellent antiscorbutic, and a splendid dish for a sick, or delicate person. For myself, I shall never voyage it again without a good supply. I had some of it on board on the 10th of this month, which has given it a complete trial. If this communication is of any use to you, in introducing this valuable root, you are quite welcome.

(Signed) R. J. Case,
Com. and part owner of the Caledonia.

Testimonial From Capt. A. Wilkinson.

Having during my late voyage to India and China had the opportunity of fairly testing your Patent Preserved Potato, on the outward and homeward passage, I do not hesitate to state it is a very valuable preparation, and an admirable substitute for other vegetables; it is portable, and with common care not liable to spoil. I shall require another supply, but cannot for the present name the exact quantity, as it will depend upon the number of my passengers.

(Signed) A. Wilkinson, *Commander of the "Crest."*

From the Honourable Dr. Newport, dated St. Johns, Belize, Honduras, Nov., 1840.

I received, viâ Barbados, the samples of Preserved Potato, which you were so kind as to send to me, both in tins and open, the latter was a very slight shade darker in colour than the former; the properties of both were unimpaired. I lost no time in distributing the samples among my friends, and am happy to report to you their unanimous approbation of your invention, the truth of which is best signified in the orders on the other side. Be so good as to execute these orders and to ship them.

(Signed) M. Newport.

From P. Walker, Esq., Government Office, to the Honourable Dr. Newport, dated Belize, Honduras, Nov. 10, 1840.

In dining yesterday at Government House, we had some of the Preserved Potato you sent in, I assure you it made a most excellent and agreeable dish, and could not be distinguished from potatoes cooked in the regular way.

His Excellency the Superintendant desired me to ask you to do him the favor of ordering some of them.

(Signed) P. Walker.

From James Gordon, Esq., to Captain Pearson, dated Antigua, July 14, 1840.

Respecting the few cases of Potato grain brought out under your charge, for the object of giving the preparation a fair trial, I have much pleasure in expressing my conviction of its proving a most economical and useful article in this country, where for some periods during every year, we are greatly at a loss for a proper supply of potatoes and vegetables in general. I have given one of the cases to Dr. Musgrave, who has reported very favourably of the preparation, another to the Rev. N. Gilbert, whose testimony is not less favourable, and another to my friend Dr. Peddie, whose written testimony, together with Mr. Wood, the Provost-Marshal-General I now enclose, and to which I would add the approval of several of my friends who have partaken of the potato at my own house.

(Signed) James Gordon.

From Dr. Peddie to J. Gordon, Esq., St. Johns, Antigua.

We had a few friends, all tolerable judges of the good things of this life, to dine with us yesterday, when we tried the Potato grain you so kindly sent me, I assure you it gave the greatest satisfaction to every one. In my opinion, it equals in taste and flavor the most *mealy Irish natives.* The preparation will be a most useful and desirable acquisition to us in this climate.

(Signed) Robert Peddie.

From Dr. Wood, Provost Marshal General, to Dr. Peddie, dated Antigua, July 1840.

Am I asking you too great a favor when I request you to let me have a small quantity of that excellent substitute for potatoes, that I tasted at your house the day before yesterday, I should like also to know where it is to be procured, for I think, if my people like it as much as myself, we shall be large consumers.

(Signed) O. Wood.

From Capt. Hamilton, Madras, July, 20 1842.

I have much pleasure in informing you that I tried your Patent Preserved Potato during my passage from England to Madras, and it was the universal opinion of myself and passengers, that it was a most excellent substitute for potatoes.

(Signed) J. Hamilton,
Commander of the "Anna Robertson."

Herewith are the signatures of my passengers to the above.—A. F. Bruce, Madras Civil Service; M. H. Bruce, M. Gillespie, F. Warner, W. H. Warner, Lieut. Bengal Artillery; H. Ross, Lieut.-Col. Madras Army; H. P. Hill, Lieut. ditto; T. V. Moore, Lieut. ditto; J. W. Arnold, W. M. Hawden, Surgeon; G. T. Migle, J. Ross, Bengal Army; H. Read, E. J. Hardy, D. Sanderson.

From Capt. Hale, of Messrs. Baring's ship, the "Alexander Baring."

Having made a trial of the Preserved Potato during my late voyage to China, I have great pleasure in bearing witness to the excellence of the preparation, and in stating that I consider it one of the most wholesome, agreeable, and nutritious articles that has ever been produced, for the benefit of those who are so constantly debarred from the pleasure of tasting fresh vegetables, as seafaring men.

H. Hale,
Commander "Alexander Baring."

From Trinidad, April, 1841.

We had the pleasure to receive your favor accompanied with samples of your Patent Preserved Potato; on their arrival we had them distributed among our friends, and in general the preparation was much approved of.

(Signed) Gray, Losh, & Co.

From Capt. Naylor, Commander of the ship "Surry," Hobart Town, Sept. 3rd, 1842.

I have much pleasure in informing you that I have made repeated trials of your Preserved Potato, and found it far exceed my expectations; I consider it a most valuable article to have on a sea voyage, possessing all the flavour of the Potato, and certainly *much more economical* than the Potato in its natural state; and I am satisfied if it is put into *air-tight* packages it will keep for any length of voyage. The barrel you put on board my ship was by no means tight, and remained in the main hold during the whole of my passage from London to Van Diemen's Land. Notwithstanding it being so loosely packed, and being in the damp hold the whole passage, on opening it I found it perfectly sweet and good. I have so good an opinion of it, that I think I shall never carry potatoes to sea in any other way. I found it so little known in Hobart Town, that I have been induced (for the information of my sea-faring brethren here,) to send a description of it, with some testimonials, to the editor of one of the newspapers, and he has given it a place for several days, in the *Colonial Times;* I have also given samples of it to different persons here, and they all have approved of it much.

H. I. Naylor.

Letter to Messrs. Ihler and Co., Liverpool, dated July 1844.

Having been induced by your recommendation to try Edwards' Preserved Potato, I have much pleasure on my return from Calcutta in expressing my entire approval of them, I consider them the best Preserved article, and the most useful I ever had on board, superior in point of economy at sea to the potato in its natural state. I used it every day in the cabin, and regretted my inability to supply the crew. They were as good the last day as the first. I am of opinion no ship should go to sea without them. (Signed) W. Soutter.
Commander of ship "Earl Powis."

Testimonial from Dr. James Lawrence, of the Convict ship "Cressy," to Dr. A. McKechnie, H.M.S. "Poictiers," 15th June, 1844.

The Preserved Potato sent to me in the "Cressy," proved to be an agreeable and wholesome preparation, and a very good substitute for the fresh root. It is a valuable article of diet in ships going long voyages, from the small space it occupies and the length of time it will keep.

(Signed) JAMES LAWRENCE.

From Captain E. Hight, of Messrs, T. & W. Smith's ship, the "Robert Small," East Indiaman.

Having used Edwards' Patent Preserved Potato as stores, on board the "Robert Small," during the voyage to and from India, I beg to state, that I very much approve of the article, and it gave general satisfaction. I consider this concentrated vegetable a valuable addition to our ship's stores.

(Signed) EDWARD HIGHT.

From Captain Tilby, barque "Ceres."

Having had an opportunity of fully testing the qualities of your Patent Preserved Potato in my late voyage to and from Africa, I take the earliest opportunity of informing you of my high opinion of the article, having proved its valuable and economical properties as an excellent vegetable, which continues unimpaired by the African climate. I should strongly recommend the Preserved Potato to my seafaring brethren. A package was opened shortly before the ship's arrival home, and was quite as good as some I used in London prior to starting.

(Signed) J. M. TILBY.

Letter dated Calcutta, 27th December, 1843.

It affords me much satisfaction to testify herewith to the singular merits and valuable utility of the Patent Preserved Potato, and this I am able to do with proper assurance, (from having had a long course of observations) in the strongest terms of approval and estimation. This Potato, supplied during several voyages to the ship in which I served as second and chief officer, during long voyages to the East Indies, was found to answer every expectation; the ship's company and troops during three or four voyages were served with it, and it was commended and approved of, as being exceedingly palatable; all considered it a most wholesome vegetable: from a long and tried experience I can concur in this, and state my conviction that the discovery of this preparation will be a blessing and comfort to all who journey on the great ocean. I am unable further to express my estimation of Messrs. Edwards' Patent Preserved Potato, than to aver its wholesomeness, cheapness, compactness, and peculiar adaptation to board-ship requisitions.

(Signed) WILLIAM CURLING,
Late Chief Officer of the E.I. ship "Ellenborough."

Letter to Messrs Ihler and Co., Liverpool.

I have much pleasure in expressing my strong approval of Edwards' Patent Preserved Potato, supplied by you. I have had them on board nearly a year, and exposed to various climates, the small quantity still remaining is as sound as when supplied; and I consider them admirably adapted to ships' use, and will never go to sea again without them.

(Signed) H. H. O. BRYAN,
Commander of ship "Iron Queen."

Testimonial from Capt. W. Black, 10th February, 1844.

Having taken your Preserved Potato as stores on my voyages, I consider this an excellent article, and keeps uninjured by change of climate.

(Signed) WM. BLACK,
Commander of Taglioni.

From Captain of the "Florentia," from Sydney, dated, Aug. 10th, 1842.

Having just returned from Sydney, and experienced the merits of your Preserved Potato, during the voyage out and home, I feel bound to record herewith the gratification this valuable vegetable afforded to myself and passengers, and from its having kept uninjured by change of climate, &c.

I can safely state that the Preserved Potato is much cheaper, as well as a much better vegetable as stores, than any other article, and have much pleasure in giving it the highest recommendation.

(Signed) W. H. Goodwyn, *Commander.*

From Port Philip, dated July 1842.

Your Preserved Potato gave great satisfaction both to myself and passengers on our passage to Port Philip, we had them on board for about six months, in all climates, and found them equally as good as when received in London.

(Signed) H. Sproat,
Commander of ship "Deva."

From Capt. S. Davidson, ship "Stirlingshire," Liverpool, July 1844.

On my voyage to Bombay now just completed, the Preserved Potato supplied by you, was found by me to be so good, useful, and economical, that I certainly shall never proceed upon any long voyage without an ample supply of that vegetable in its Preserved state. Although the potato was eleven months on board the ship, it was equally good and sound, on the last day of the voyage as when it was shipped. Owing to the comfort I derived from the article, I cannot too strongly recommend it to general notice.

(Signed) S. Davidson.

Letter to Messrs. Ihler and Co., Liverpool, dated June 19th, 1844.

I have the pleasure of informing you that Edwards' Preserved Potato, you supplied me with, gave the passengers and myself the greatest satisfaction on our passage to China, indeed the passengers for some weeks were ignorant of their being other than potatoes in their natural state; we appreciated them the more as sailing from England in June, the season when neither old or new potatoes would keep, if put on board.

I used it during the passage home, and it remained unchanged up to my arrival; indeed, finding here potatoes were very wet, I caused to be cooked and served up on board to my friends, some of my remaining stock, out 12 months, who, without knowing of the preparation, declared I had better potatoes than they could get on shore.

(Signed) Henry Crawford,
Commander of ship "John Bull."

Letter to Messrs. Ihler and Co., Liverpool, dated Aug. 31st, 1844.

Having seen the testimonials published in regard to Edwards' Patent Preserved Potato, I think it but justice to the Patentees to add mine in support of so useful and necessary an article. I have had them in my last two voyages to Australia, and found them so serviceable, as well as economical that I shall always take them as part of my stores, I gave them twice a week to the crew, who were perfectly free from scurvy in consequence of it.

A strong proof of their value is, that I have still some by me which have been *twice to Sydney and back*, and are now as good as any in your stock; thus affording from the vicissitudes of climate an ample proof of the confidence with which they may be taken on the longest voyages.

(Signed) P. Waken,
Commander of ship "Columbian."

Extract Special Report from Major A. H. Waters, Royal Engineers Office, Barbadoes, dated Aug. 1843.

I have had the honor to receive your letter of the 19th inst., accompanying a sample of Preserved Potato, on which you request my opinion for the information of His Excellency the Commander of the Forces, as to whether the article in question would prove a desirable substitute for the vegetable now daily used by the troops. In reply thereto I have to remark that following the directions given for the preparation of the material, I found it attended with great facility, and the production, used with any sort of condiment, was very good. The Preserved Potato would come in, if not as an entire substitute, at least as an excellent change, and relief from the sweet potatoes; also in hospitals, and on board of ships, particularly in cases of long voyages, the Preserved Potato in my opinion would be valued, we can at once perceive, how much could be stowed in a small space, but we must determine by experience with the view of general use, whether the ingredients will keep well as promised to do, and how far it may be affected by climate, which it is declared it will not be; because if this Potato stand the test of Messrs. Edwards' declaration, it might yet become an useful article of provisions for troops engaged in coast warfare, and depending on ships for their supplies.

(Signed) A. H. Waters,
Major Resident Royal Engineers.

Letter from J. Marks, Esq.

I have tried your Preserved Potato and find it a most desirable vegetable when cooked, and from my long experience as purser in the Royal Navy, having often felt the deprivation of vegetables, when on a long voyage, I can with confidence recommend it, *as a valuable article* for shipping purposes.

(Signed) John Marks.

EXTRACTS FROM PUBLIC JOURNALS.

From the Nautical Magazine.

We perceive that the Prepared Potato for sea stock of Messrs. Edwards' has been used on board H.M.S. Rattlesnake, just arrived from China. We understand that it was part of a supply sent to China in 1842 for the use of Her Majesty's ships, and the very high opinion given of it by Dr. Allan, in charge of the sick on board that ship, is another satisfactory proof of its great utility at sea.

From Colburn's United Service Magazine.

We have made trial of a small specimen sent to us of the Preserved Potato. It is highly nutritious, occupies little space, is extremely cheap, and may be used either as vegetable or pudding. This concentration of a most valuable and abundant vegetable, will prove highly important to the navy and shipping interest. No vessel should go to sea without it, and we venture to predict that none will, after the captains or owners have given it a trial.

From the Newfoundland Vindicator.

His Excellency Sir John Harvey in his extreme solicitude to promote the comforts of the people of this Colony, has sent to each of the editors of all the public journals of this town, a sample of Edwards' Patent Preserved Potato, for which we beg leave to return our most respectful thanks.

In a climate like ours, this preparation would indeed seem a desideratum, because all the farinaceous and nutritive parts of this useful vegetable are completely separated from the watery, thereby rendering them perfectly secure from the effects of frost.

From its *cheapness* and portability, we think it ought to be strongly recommended.—Ed.

To R. Wight, Esq., Superintendant Surgeon, P. D., Bombay, dated Aden, Aug. 1844.

I do myself the honor to send to your address in a separate parcel, a specimen of Preserved Potato, which I procured from a ship at Aden, on an inspection of the article it has occurred to me, that it would be a most valuable addition to the rations of European troops on board ships to and from England; also at stations in India and its dependencies, where vegetables could not be procured, or not in sufficient quantity. In scurvy its advantages would be very great, and in many other diseases when a vegetable diet might be deemed advisable.

From the surprising manner in which it increases whilst preparing, (as per printed instructions enclosed,) I should think two ounces of the dry preserve sufficient for one person. The great length of time which it will keep, and the small space which it occupies also deserves notice.

It has been tried by the messes at Aden, and highly approved of, the price is, I believe, in England trifling.

May I request that this letter, with the accompanying specimen of the Preserve, may be submitted for the consideration of His Excellency the Commander-in-Chief.

(Signed) J. P. Malcolmson,
Civil and Staff Surgeon.

From Dr. McAlister, Surgeon Superintendant of the Government Emigrant ship "Royal Consort," dated London, Nov. 1844.

I feel myself called upon to mention, that the Patent Preserved Potato put on board the Government Emigration ship "Royal Consort," from London to Port Philip, Oct. 28, 1843, kept in a sound and preserved state not only to New South Wales, but to India, and back again to England. I am convinced from what I know of it, that it is a most important part of the *Scale* of *Rations* allowed to emigrants, (by her Majesty's Government,) on long passages, not only from its possessing a large quantity of *nutrition* in a small compass, but from its being of easy digestion, and very easily and quickly cooked, also very portable. It can be made, into various and extremely palatable puddings and dishes, with very little trouble *all of which are high recommendations to it as an article of food for emigrants, troops, and other sea-going people.*

From the high opinion I have of the Patent Potato, and the desire that the emigrants expressed in having an additional quantity granted to them in lieu of any other part of their ration, and from the *general good health* which I observed amongst them during the passage, I have no doubt to say that it is an article of food well worthy the attention of all those who have an interest in the health of people going to sea on long voyages. Hoping that it may come into more general use.

(Signed) James M'Alister,
Surgeon Superintendant, &c. &c.

Intelligence by Bottle Papers.—The following is a very remarkable instance of intelligence being conveyed by a Bottle Paper:—

"Bound to Spithead from Cape of Good Hope, 65 days, H.M.S. *Cornwallis*, off Portland Bill, bearing at 12 o'clock, S.E.b.S. 7 miles, blowing ten, ship under close-reefed main-top-sails, fore-sail, and main-stay-sail, main and mizen trysails. Dated November 1st, 1844. Signed ————————.

The bottle containing a paper on which the above was written, signed J. Eloset, as far as we can decipher it, was washed on shore at Berry Head, at 11 A.M., on the 3rd Nov., and it is a remarkable fact that the intelligence which it gave to the Admiralty of the *Cornwallis*, preceded that of the Telegraph, announcing her arrival at Spithead, by about three hours. We, however, find that the *Cornwallis* arrived off the Bill of Portland, on the afternoon of the 31st of Oct., when her progress was arrested for three days by a strong gale of wind from the south-east, which no doubt was the means of the bottle drifting in the direction which it took from her position to Berry Head.

LOSS OF THE TARTAR.—*The Norwegian Admiralty Court. Foreign Markets.*

SIR.—In your October No. I find an account of the very unjust proceedings of the authorities at Heligoland, in reference to several ships recently wrecked there. From what has happened to myself I shall be able to prove that the Norwegian Admiralty Court is quite as unscrupulous as that at Heligoland. However, I will detail the circumstances which produced the case, it is my intention to narrate.

In February last year, I purchased the fine new A 1, brigantine Tartar, (138 tons per register N. M., 143 O. M.) of Mr. H. Barrick of Whitby, the builder. The Tartar was then in London. In the latter part of March I proceeded there to superintend her outfit for the next voyage, and also to be ready to proceed with her for the same.

Messrs. Taylor, Mousley, and Hatchett, loaded the brigantine for Hamburgh, where she arrived on the 7th of May. On the 1st of June we left Hamburgh for Archangel, and arrived there on the 7th of July, and sailed for Hull on the 27th of the same month.

During the homeward voyage, excepting contrary winds, and some very heavy gales, nothing material occurred until the 29th of August, in lat. 63° 52′ N., long. 1° 30′ E., (about 1400 miles from Archangel, and 180 from the Shetland Islands,) when about half-past 1 p.m., when under a close-reefed main-sail and single-reefed top-sail, blowing hard from the south-west with a heavy swell, the Tartar was struck by a very heavy sea right over the bows, which carried away the bowsprit, and both masts instantly fell over the larboard side. The shrouds, &c, were cut as soon as possible. To prevent the wreck of the masts from staving in the vessel, a warp was made fast to the wreck, which kept the vessel bow on to the sea. Most unfortunately, as soon as this was done, a barque hove in sight, and bore down for us ; soon after one of her boats came alongside, offering to take us on board, at the same time informing us that, if we declined this offer, they could not stop to render us any further assistance, being outward bound to Archangel, and the season getting far advanced. Notwithstanding all that I said to the contrary, the master, (George Seaton, belonging to this town,) and men, persisted in leaving the Tartar although there were plenty of provisions and water, as well as spare spars, sails, &c., on board, distant only 80 miles from the coast of Norway, and the ship tight. After running a far greater risk by being exposed in an open boat in a heavy sea, than would have been incurred by remaining on board the Tartar; providentially all got safely on board the barque, which proved to be the Brothers of Dundee, Capt. Reid. We remained on board the Brothers till the first of September, when we spoke the brig Cecilia, of and for Arbroath, Capt. Macdonald. Myself, the master, mate, and one seaman, late belonging to the Tartar, were received on board. The Cecilia arrived at Arbroath on the 21st of September. To Captains Reid and Macdonald I am deeply indebted for the kind and hospitable treatment which we experienced on board their vessels, and I beg to return them my sincere thanks for the same.

After arriving at Arbroath, I learned that the Tartar had been picked up off the island of Smoelen, on the 4th of September, and towed into a place of safety there. Of course I anticipated having to pay salvage;

however, shortly after I received a letter from Christiansund, stating that the Tartar had been sold by order of the Norwegian Admiralty court, for about one third of her value. The excuse for selling her, was, that she was not in a place of safety. The falsehood of this statement is immediately apparent, for the person who bought the brigantine let her remain in Smoelen for nearly three months afterwards, and these months as we all know, are amongst the most tempestuous in the whole year. Also, during the time the Tartar was in Smoelen, the purchaser wrote and offered me the vessel at a very greatly increased price to what he had given. He had done nothing whatever to her, and all this time she was in the very place which the Norwegian Admiralty Court had pretended was so dangerous. Mr. Clausen, the British Vice-Consul, protested against the sale, on the ground that the vessel was quite safe, and that the owner had not had time to put in a claim for her. From enquiries which I have subsequently made in London, of different Norwegian merchants, &c., I find that the Norwegian law is, that if a vessel which has been picked up, is not claimed within a year and twenty-one days, *then* the Admiralty Court is justified in ordering her to be sold, *and not until then.* In defiance of laws, treaties, &c., many foreign Admiralty courts do just what they like with British property when it unfortunately falls within their power. It is quite useless having British Consuls to protect British property, if the English Government will not bear them out in fulfilling their duty, and allow foreign Admiralty courts to plunder British subjects in this unjust manner with perfect impunity. Although it is upwards of thirteen months since the sale of the Tartar and her cargo, not one farthing of the balance of the sale of the one or the other, has yet been received, either by the underwriters or owners of the same. In answer to applications made to Mr. Clausen on this subject, he says that he has done all in his power to induce the Admiralty court to pay the money, but without success. The court offers no excuse whatever for acting in this suspicious way. A knowledge of what has happened to myself, may, I hope, put shipowners on their guard, if they should unluckily ever have anything to do with the Admiralty court of Norway.

I wish to take the present opportunity of thanking Capt. McMaster, of the very fine barque Rory O'More of Liverpool, for his very humane conduct in saving a boy belonging to the Tartar, who fell overboard in the London Docks. The boy was at the last extremity, when Capt. Mc Master rushed over the vessel's side, and saved him from a watery grave. This was the third time that this courageous seaman had risked his own life to save those of his fellow-creatures. Such conduct really deserves the greatest praise.

The charges on vessels at Hamburgh are reasonable, those for the Tartar did not exceed £16. After a long prevalence of easterly winds, which is frequently the case in spring, the water in some parts of the Elbe is often very low, so that vessels drawing more than 11 or 12 feet, are detained for some time before they can get over Low Shoolah bar, (which is only a few miles from Hamburgh,) unless they incur the expense of lighters.

In Archangel the charges on vessels are not excessive, still they are quite high enough; the Tartar's bill for port charges and Broker's

commission was about £25. Excellent beef may be bought for something less than 2d. per lb.; also capital dried ox tongues may be purchased from 5s. to 7s. 6d. per doz; biscuit is quite as dear as in England. Vessels are not allowed to load more than to 14 feet in Archangel, they must anchor outside the bar, in the open sea, if they are intended to be laden beyond this depth of water.

The passage to Archangel is a difficult and dangerous one. Although the distance from London does not, I believe, exceed 2,300 miles, yet ships are very commonly eight or ten weeks coming out. Very heavy gales are frequently experienced off the North Cape, the high latitude in which it is situated, (nearly in 72° N.) will account for this. I heard a shipmaster of forty years' experience, say, very lately, that he had seen heavier seas off the north cape, than in any other part of the world.

I would recommend all shipowners, previous to signing what are termed "open" charters, to take particular care that a clause is inserted, excepting mats and codilla. The so-called London proportionate rates of freight are very unproportionate, especially as regards these articles. I will give an instance as to mats. The Tartar would have carried about 1050 quarters of linseed, which at 4s. 6d. per quarter, (the rate as per charter, a very low one for that voyage,) would have produced about £237 freight. As it was, she only took in 700 quarters of linseed, and 7000 mats. The freight on this quantity of seed, would have been £157 10s., and on the mats about £42, at the outside, total, about £200. Thus by having one third of the cargo, mats, a loss of £37 would have been incurred: so much for the London proportionate rates. Mats ought to pay twice as much as they do, according to these rates, to be in a fair proportion to linseed. Besides the loss of freight, I had to pay 2 or £3 for screwing the mats; had the whole cargo been linseed, of course no expense of this kind would have been incurred. When at Archangel, I was told by an experienced master of a ship, that codilla was, if possible, worse than mats in spoiling a freight. Information of this kind may, possibly, be of great value to those shipowners who, hitherto, have not had anything to do with these articles. If many shipowners would give the public the benefit of their experience through the medium of the *Nautical*, a great deal of perplexity and loss would be frequently avoided.

I would also earnestly impress upon all owners and masters, the very great importance which there is for having the bowsprits and masts of their vessels well secured. The bobstay should never be tight, it should be rather slack than otherwise, for when a vessel is pitching heavily, if the bobstay is tight, the whole strain of the masts is upon it, and if it gives, the bowsprit and masts, if they are secured to the latter, are carried away directly. I attribute the loss of the Tartar's bowsprit and masts entirely to the breaking of the bobstay; it so happened that this bobstay had been tightly set up only a day or two before. I am well aware that some shipmasters say that the bobstay should be kept tight, to prevent the masts having any play. However, from what I have seen myself, and from what I have heard from some very experienced men, I am quite convinced that this is a most fallacious and dangerous opinion to entertain. A brigantine should always have her main stay se-

cured to the deck, had this been the case with the Tartar, it would have been the saving of that vessel.

The proposed plan of examining shipmasters is very greatly required without doubt. Their certificates should be liable to be taken from them, for cowardly abandoning their owner's property, habitual drunkenness, dishonesty, &c. &c.; this would be a check upon them, and it is what is very much wanted.

As regards common seamen also, some fresh law is very greatly needed. Nothing is more common than to find on shipboard, men, not only very idle, but also very abusive to their officers in the bargain. A knowledge of the fact that there is no law to punish them for this infamous behaviour, makes them so. A severe punishment, to be inflicted in some way or other, should be authorized to check this evil. The men, of course, are paid and fed to do as they are told, and not to insult the officers placed in authority over them. If what I have written should be of any service to any of your readers, I shall be amply rewarded. Wishing that others may be induced to give their experience in nautical affairs,

I am, &c.,

THOMAS HODGSON.

[*No.* 2, *William Street, Charles Street, Hull, Nov.* 7, 1844.

To the Editor, &c.

LATE VISIT TO PORTSMOUTH OF THE FRENCH SQUADRON.

A letter of which the following is a translated copy, has been received by the chief naval, military, and civil authorities at this port, acknowledging the universal courtesy, hospitality, and friendly disposition exhibited by the British officers and civilians towards the officers of the French squadron on their recent short sojourn here:—

Paris, Oct. 26, 1844.

SIR.—The official reports which I have received from Vice-Admiral Baron de la Susse, contain the most minute accounts of what took place at Portmouth in the reception given to the officers of the French squadron by the eager assembly of the population of that port, together with every honourable manifestation from the English Royal Navy, which was added thereto.

I have at the same time received an account of the additional splendour which was united to these noble demonstrations by the visit which her Majesty the Queen of England condescended to pay to the frigate Le Gomer, after the departure of his Majesty the King of the French.

The first professions, which, according to the example constantly given by your Excellency, had so handsomely taken place on the part of the officers of the English royal navy, and of the principal authorities and other inhabitants of Portsmouth, have been crowned in the most flattering manner by its having pleased her Britannic Majesty to grant the distinguished favour of her presence on board the vessel which bore the flag of Vice-Admiral de la Susse, and these testimonials have been warmly felt by the whole royal navy of France.

I come, therefore, M. Admiral, in the name of the naval and military body at the head of which I have the honour to be placed, to request your Excellency o receive for yourself our thanks, and to express as much as possible to the

royal navy of England, as also to the different persons who were kindly pleased on that occasion to unite in the feelings by which they have shown themselves actuated, the deeply gratifying remembrance which we all preserve of the reception which has been given us in that port of Great Britain where the flag of your Excellency floats.

This reception, which accords so well in every respect with the existence of the reports of the perfect harmony which I have so frequently seen manifested between the navies of the two countries, is at this time the indelible sign of the just and mutual esteem which unites them.

In congratulating myself most truly, M. Admiral, on being called to become the faithful interpreter of these sentiments, I esteem myself happy in having to add thereto the personal confidence with which I have the honour to be,

Yours, &c.

MACKAU, *Vice-Admiral, Peer of France, and Secretary of State for the Navy & Colonies.*

To Admiral Sir Charles Rowley, Bart,. G.C.B., G.C.H.

MR. BASS ON CAPTAIN BEECHEY'S ARTIFICIAL HORIZON.

SIR.—I cannot regard Capt. Beechey's letter inserted in your last number as at all satisfactory with respect to the only point of any importance that is at issue between us. I trust therefore that you will, in justice, permit me very briefly to state the facts of the case.

Captain Beechey, it appears, had been for some time endeavouring to construct an Artificial Horizon for use at sea, on the principles of the dipleidescope. He had not, however, succeeded as he wished, and hearing last February of my instrument, which was then, as it still is, privately in progress, he called on me, and asked me if I had any objection to shew it to him ; that he might be able, as he stated, to judge by my measure of success, how far it might be worth his while to proceed in his own attempt.

The dipleidescope, as is well known, is an instrument of double reflection, and my instrument depends wholly on refraction ; so that there appeared no possibility of any collision between us, and I therefore readily assented. I was quite willing that he should produce a better instrument than mine, on his principle of the dipleidescope, if he could ;—and he expressed his own view of that prospect, in the following words, in a note which I received from him a few days after he first saw and examined my instrument :—"Capt. Beechey begs to state, that he has not entirely given up his deleidescope, and he mentions [it] in candour to Mr. Bass, in case he should succeed in his endeavours. He does not apprehend Mr. Bass has much to fear at present." Of course, on reading this, it would have been most ungenerous to have attributed to Capt. Beechey any design beyond that of possibly perfecting his dipleidescope ; nor did he give me the slightest reason to suppose either in conversation or writing, that he was then engaged on any other plan.

I am sorry, however, to repeat that the instrument which Capt. Beechey announced in your Magazine for August, and which he claims for himself, as "on an entirely new principle," is not the dipleideseope, or any adaptation of that instrument. It is identical in principle with the instrument I had shewn him, that principle being the production, by means of refraction, of continuous contact between the horizon vane and the object, as they traverse the field of the telescope. The details Capt. Beechey has adopted, and their resemblance to, or dissimilarity with mine, are a very subordinate matter. It is not a question of details, but of principle. I will only add, that Captain Beechey's remark, on the likelihood that two inventors, "engaged in the same pursuit, will

tread nearly in the same path," does not apply to the case. The two inventors were already treading in perfectly different paths, and it was only on a distinct understanding on this point, that I was led to make the communication, which were the matter of more importance, I should have now so much reason to regret.

I have, &c.,

To the Editor, &c. J. H. Bass.

Wrecks of British Shipping:

cs crew saved—d drowned.—Continued from page 726.

VESSELS NAMES.		BETONG TO.	MASTRS,	FROM.	TO.	WRECKD.	WHEN.
Ann	288	Borrowslnes	Johnston	Limerick	Liverpool	Dundalk	Nov. 1. cs
Antœus		S. Shields	Golightly	———	———	Gunfleet	Nov.
Apollo	290	Montrose	———	Sunderland	———	Bulmer R.	Nov. 4 cs
Belle		———	Corner	Waterford	Liverpool	Point Ayr	Nov. 11
Belgrave		———	Vickers	———	———	St. Georg C.	Oct. 19.
Boconnoc		Fowey	Polglass	———	———	Cardiff	Nov. 13 cs
British Hero		Newcastle	seamen br	rought home	by Alfred	Gothland	
Celia Large	295	Cork	Large'	Ringston	Cork	Mariguana	Aug. 9. cs
Celia		London	———	———	———	Seaton	Nov. 2,
Dash		London	Hartlie	Jamaica	Africa	N. Bemini	Oct. 6.
David		———	Waum'thr	Newport	Stettin	Crackington	Nov. 11. cs
Eleanor		Sunderland	Douglas	Sunderland	London	Scroby S.	Nov. 13. cs
Europe	300	Dundee	Brodie	Narval	Liverpool	Downpatrck	Nov. 12.
Fairy Queen		———	Clarke	Liverpool	Corfu	Launceston	Nov. 13. cs
Fanny		Sunderland	———	———	———	Sunderland	Nov. 12. cs
Firefly		———	Kerr	Liverpool	Africa	run down	Nov. 15.
Georgiana		Shields	———	———	Dieppe	Tees	Oct. 25. cs
Isabella	300	———	———	P. Philip	London	Kings I.	Juue 22 cs
Isis		Whitby	———	———	———	Bulwar B,	Nov. 3.
Iris		Whitby	———	———	———	Warkworth	Nov. 2.
John & Mary		Dublin	———	Quebec	Liverpool	crew picked	
Kerswell		Plymouth	Brooks	Boston	Miramichi	Manadieu	Oct· 4. 2d
Knysna	305	Harrington	Gibson	Westport	Bristol	Crackington	Nov. 11. cs
Ladies Adveture		———	———	Cork	Whitehaven	Holyhead	Nov. 10, cs
Lady Scott		Liverpool	Glenday	crew saved	byLaDorade	G. Finland	Sept. 17 cs
Pilot		———	Pepper	Maldon	Goole	Whitton S.	Nov. 11 cs
Scotia		———	Aiton	St. Johns	———	Newfoun'lnd	Oct. 19. cs
Sir A. Campbell		———	Bawtree	Sydney	Sincapore	Cockburn R.	June 1. cs
Sprat	306	Yarmouth	———	———	———	———	Oct· 10
Suffolk Hero		———	———	London	Sligo	Killala	Nov. 10 cs
Tyne		Lowestoft	Snood	Shields	Lowestoft	Off Whitby	Oct. 26 cs
Varehwal		Conway	Wrench	Bangor	Liverpool	Conway	Nov.
William		Runcorn	———	———	———	Cornwall L.	Nov, 12
Wm. Gillies'	311	Glasgow	———	———	———	I. Martin	Nov. 11.

The Steam-Whistle.—It is well known that one of the most common causes of the explosion of steam-boilers has been the want of a sufficient quantity of water in the boiler at the time that the heat underneath was very large. In many instances the deficiency of water has resulted from the negligence of the attendant engineer, combined with the fact that no alarm was given, previous to the moment of explosion, of the exact state of the water in the boiler. Happily an efficient and simple exponent of the depth of water in the boiler at the time of working, and which will act as a powerful alarum in case of danger, has just been applied to the steam-boilers at one of the largest manufacturing establishments of Leeds. By affixing a small pipe in communication with the interior of a boiler at that point below which it is well known to be unsafe to allow the water to be consumed in the generation of steam, and at the top of such pipe putting one of the common whistles that are attached to the railway locomotive engines, a very efficient alarum, as we have said, is formed; for as soon as the

water within the boiler has been consumed below the point where the pipe enters the boiler, the steam will rush up the pipe, and thence into the whistle, giving a timely warning of the deficiency of water in the boiler. We are not aware whether any similar means of safety has been tried at any other place; but whether it has or not, we think the subject is of sufficient importance to warrant us in giving the information conveyed in this paragraph to the public.

The following is from the Rio Janeiro *Journal do Commercio* of Aug. 1, 1844, and which has been posted this day in the Underwriter's Rooms :—

"The English brig Amity, John Charles Hogue (query Hodges), master, sailed from London on the 7th May last. bound to Tagura (a port to the south of the Straits of Bab-el-Mandeb, in the Red Sea,) and arrived on the 23rd of June in the sight of the island of Trinidad, and as it was calm the master landed on the island to verify the chronometer, and to shoot. In attempting to regain the vessel the boat was upset in the surf and broken to pieces, and a sailor drowned. Thus deprived of the means to return to his vessel, the master was compelled to continue on the island, with the three sailors that remained. The Amity was in sight two days, but the mate made no attempt to succour them, island she afterwards disappeared in the horizon, thus abandoning in a distant and the master and three of the crew. They remained there for twenty-three days, sustaining themselves on shell fish, until the 16th of July, when they were rescued from their painful situation by the American ship Brandt, which brought them to Rio de Janeiro.

Greek Pirates.—Letters from Athens dated Oct. 31, and quoted in the *Times* of Nov. 19, contain the following paragraph.

"A party of Palichars a few days ago seized a small vessel in a creek near Atalanti, and then set off on a piratical cruise, in which they seized three boats laden with merchandise close to the island of Skyros. What else could we expect from a Palichar Ministry?"

The index of the present Vol. will refer the readers of the *Nautical* to many other instances of piracy which have occurred in the Levant in 1844.

Nautical Notices.

New Guano Island.—*West Coast of Africa.*—Gallovidia Island in Rae's Bay, lies 24 miles northward from Angra Pequena, and is North of a point of land, probably the first one to the northward of Angra Pequena, that stretches out 3 or 4 miles to leeward. It is entirely covered with guano, to within a few feet of the water's edge. According to one estimate, the guano is 25 feet deep, but according to another, it is 30 feet deep. A person from the southward may easily overrun the island, as it is covered by the point of the main land to the southward of it: and the breakers on the reef make, and have such an alarming appearance, that most persons will be afraid of going near them, and will, in consequence drop to leeward of it. Large vessels ought, if necessary, to anchor to the northward of the north entrance of Enterprise Harbour, which is formed by the island, and is to the southward of it, and tow or warp in; or if the wind should be favourable, they may sail in.

The Point is partly rocky and cliffy, but near the neck of it, is low and sandy, so that Ichaboe may be seen over it, from the masthead of even a small vessel anchored in the harbour.

Handy working vessels may turn in, taking care to keep half a mile from the N.E. reef. The coast of the main land is clear to less than a quarter of a mile

distance. The N.W. reef from the point of the main land, and the west reef from the island almost meet, and the passage between them must not be attempted; but these two reefs, and that to the N.E. of the island, break the sea off, and make the anchorage secure at all times. Plenty of fish may be got all round the island with hook and line, and cray fish may be caught with hook and net within 100 yards round the island.

Wind and current mostly setting to the northward, and the island being hid from the southward, a person must be cautious, and not get to the northward of it.

Rae's Bay was discovered in 1844, by Mr. R. Rae, master of the Gallovidia schooner. A further account of it will be found in the Ethiopic or South Atlantic Memoir, pp. 422, 423, published by Mr. Laurie, 1844.

Trinity House, London, 23rd October, 1844.

Blyth Sand, River Thames.—This Corporation having caused certain works to be executed with the object of constructing a permanent foundation for a standing beacon in six feet at low water spring tides, upon the north-westernmost spit of the Blyth sand, and about 1½ cables length N.W. by W. ½ W. from the present standing beacon.

Notice thereof is hereby given, and masters of vessels, pilots, and other persons, are requested to observe, that the easternmost part of this structure is marked by a staff bearing a board, with the words "Trinity Beacon" thereon, and surmounted by a ball; they are cautioned to avoid injuring either the beacon, or their own vessels or craft, by passing it at a sufficient distance to the northward and westward.

By order, J. Herbert, *Secretary.*

Hydrographic Office, Admiralty, Oct. 25, 1844.

Revolving Light on the Rock of Lisbon.—The Portuguese Government has given notice, that the light on Cape da Roca, or the Rock of Lisbon, has been altered from a fixed to a revolving light, each revolution being completed in two minutes. During the first minute, it will present a red light, the greatest intensity of which, will continue thirty seconds, and during the second minute, it will present a bright light, the greatest brilliancy of which will also continue thirty seconds.

The light is in latitude 38° 46′ 5″ N. and longitude 9° 29′ 0″ W. and being 498 feet above the level of the sea, may be seen, in very clear weather, at the distance of 8 or 9 leagues.

Harbour Master's Office, Auckland, March 7, 1844.

New Zealand Buoys.—A buoy, painted red, with a white head, has been placed about a ship's length to the northward of a sunken rock lying about one mile and a quarter to the eastward of the island "Tiri Tiri Matangi."

This rock lies nearly in a line between the Peaks of Rangitoto and a little Barrier island, and has about two feet water over it at low water.

A similar buoy has also been placed over the rock lying to the N.N.Eastward of the North Head of this harbour.

This rock has six feet of water over it at the lowest spring tides, and can easily be avoided by keeping towards mid-channel between the North Head and Rangitoto, or with a fair wind passing about midway between the buoy and the North Head.

David Rough, *Harbour Master.*

Turk's Island.—Sept. 5.—The Br. brig Cecily Large has been lately found

on the south-east point of Mayaguana, derelict. The captain and crew, it is supposed, took to their boats. It is not known to mariners, that, within a year or two. several settlements have been made at the south-west point of Mayaguana, where shipwrecked persons may get relief, by running down in their small boats, and lives and property would, in consequence, be saved.

Singapore.—August 8th.—Captain Dumaresq of the Antelope, reports that, in Horsburgh's charts of Malacca Straits, there is a doubtful three fathom bank laid down, bearing from Tanjong, Jatta Point N.b.E. fourteen miles, from Malacca town S.W.b.S. twenty miles, and from Onjong Bantan Point (on Pulo Rupar) S.E.b.E. ½ E. twenty-two miles. This (says Capt. Dumaresq) I should think was its true situation, but the depth of water not correct; for in passing through in the Antelope, drawing 14 feet, she touched several times, and it being smooth, there could have been but little over 2 fathoms water, which would be a dangerous shoal for any vessel drawing over 13 feet. The man in the chains had several casts of 2½ fathoms hard bottom. We were going at the time at the rate of about 4 knots, with a fair wind.

Falsterbo Light-vessel.—The Royal Swedish and Norwegian Consul General at Copenhagen has, under date October 14, given notice that, according to an official communication made to the Consulate General, the new light ship near the Falsterbo reef in one of the last gales got adrift, and arrived at Malmo with damage; and that on account of the strong weather it has hitherto not been possible to replace her in her position near Falsterbo.

Captain Taylor's Breakwater.—Shoreham.—Oct. 12.—The second breakwater built here, by Captain Taylor, was launched to day, from its building place, into the river Adur. A third is nearly ready, and will be launched the next spring tides.

Hydrographic Office, Admiralty, Oct. 25th, 1844.

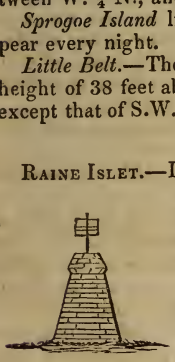
Lights in the Belts.—The Danish Government has published the following notices:—

Great Belt.—A fixed light has been established on the westernmost point of Zealand, called Reefs Næs at the northern entrance of the Great Belt. The light stands on a tower, at the height of 70 feet above the level of the sea, and is visible to the distance of three leagues, on all bearings, excepting those between W. ¾ N., and N.N.W

Sprogoe Island light revolves four times in a minute, and in future will appear every night.

Little Belt.—The fixed light on the island of Baagôe has been elevated to the height of 38 feet above the level of the sea, and is now visible on all bearings except that of S.W.b.W., where it is concealed by the town of Baagôe.

Raine Islet.—In this day's number of the *Shipping Gazette*, we present our nautical friends with a sketch of the Beacon which will be erected on Raine Islet, by the gang which has proceeded thither in H.M.S. Fly, under the direction of Capt. Blackwood.



The total elevation above high water mark will be as shown by the above sketch nearly ninety feet. Its circumference at the base will be 30 feet, immediately under the coping 16 feet, and at the top 8 feet. It will be a solid circular structure, and from the materials which the islet affords, it will probably become a more compact mass as it increases in age.

The total elevation being 90 feet above high water mark, the beacon will be visible at the distance of ten, and in clear weather of 15 miles. The beacon, it is reported, will be complete in three months from the time of the arrival at the islet of the working party.

Variation of the Compass.

Royal Observatory, Greenwich,
Magnetic and Meteorological Department, Nov. 8, 1844.

Year.	Month.	Mean Magnetic Declination.	Mean Magnetic Dip. At 9 a.m.	Mean Magnetic Dip. At 3 p.m.
		° ′ ″	° ′	° ′
1843	4May	23 6 10	68 59½	69 0
	June	12 31	69 1	69 2
	July	11 18	69 1	69 1¼
	Aug,	11 21	69 0½	69 0
	Sept.	16 31	69 0½	69 3
	Oct.	16 12	69 0½	69 3½
	Nov.	15 50	68 59	69 1½
	Dec.	17 3	69 1¼	69 1½
1844	Jan.	19 22	69 1	68 59½
	Feb.	18 43	69 2	68 58¾
	Mar.	18 42	68 59½	69 0¼
	April	18 42	68 59½	69 0½
	May.	19 23	69 1	69 0½
	June	19 6	69 1	69 1¾

Captain Becher, R.N. G. B. Airy.

New Books.

A Treatise on Harbours *with a demonstration of the general theory of Bars; and Plans for the improvement of the harbours on the South-eastern Coast of England; by* W. B. Prichard, c.e., f.s.a., &c., Vol. 1, in 4to. London, 1844.

The improvement of our harbours is an object of paramount importance; not only on account of the great increase of our trade, and the rapid progress of railway communication, but for the preservation of life and property which is sacrificed to a fearful extent in every gale of wind that blows on our coasts. Ths pages of the *Nautical Magazine* record the wrecks of upwards of 600 British vessels yearly, or nearly two a day, and yet in spite of these appalling facts, and report after report of Shipwreck Committees of the house of Commons, no step is taken either to provide harbours of Refuge or to improve the various tidal ports along our coasts. These latter too are daily deteriorating either through neglect or still worse, in some cases, from the reckless encroachments and dilapidations caused not only by individuals, but even by the Government itself. In a country so essentially commercial, so entirely dependent upon her shipping for her existence as a nation as Great Britain is, this would seem incredible, yet so it is; and it is most deeply to be lamented. We cordially welcome, therefore, any work that directs attention to these points, and we think Mr. Prichard's book is a step in the right path.

The subject of the improvement of our harbours may be a difficult one, yet not so difficult but that it may fairly be grappled with if done so in the right spirit. Simple engineering is not quite enough, the engineer must com-

bine a knowledge of the action of water, and be something of a sailor, if he hopes to succeed where our most eminent Civil Engineers have signally failed. Above all things he should lay aside all pre-conceived theories and prejudices, and all taunts at brother engineers, (which we regret to see disfigure Mr. Prichard's pages) and examine each individual subject in all its bearings before he ventures to legislate; he may rest assured that although there may be a few great principles which should never be lost sight of, that every harbour along our coasts must be thoroughly studied and prescribed for alone.

The 1st. vol. of the work before us, the only one yet published, consists of five books; the 1st. is devoted to the classification of harbours, namely natural and artificial, and the importance of their improvements to various classes of society. The 2nd to the theory of bars at the mouths of harbours, containing four chapters. In the three first the author endeavours to shew the fallacy of all existing theories; in doing which he seems entirely to have lost sight of the Spanish proverb," those who live in glass houses, &c.," speaking slightingly of the works of eminent men from whom, if he could have learnt nothing else, at least he might have learnt courtesy. In the 4th chapter the author propounds his theory on the *true* cause of bars; which, without admitting it to be quite all he would claim for it, deserves attentive consideration. The 3rd book treats on the original source of the shingle on the southern coast of England; ' and its mode of travelling, as connected with the formation of bars systematically explained." On this point Mr. Prichard has much to learn, and did our space or our leisure permit, we could prove to him that he must go to school again before he pronounces *ex cathedra* on a subject, on which he is but yet a learner; we may refer him to the twenty queries on *Shingle Beaches*, contained in the *Nautical Magazine* for October, p. 628, to shew that more experienced persons than himself have not been able to arrive at conclusions to which he jumps without hesitation. We may hereafter find time to return to this part of the work.

The 4th and 5th books are devoted to an historical account of the engineering works of the port of Arundel, from the year 800 to the year 1844, and plans for the improvements of the port and the permanent prevention of its bar. Both these books are of great interest; and the slight curve recommended for the pier and the making the outlet harmonize with the stream of tide are steps in the right direction which we should rejoice to see put in practice.

The author promises a second volume, which if carefully executed will be of still greater interest than the first. It is to contain an historical account, from the earliest period, of Shoreham, Newhaven, Hastings, Rye, Romney, Hythe, Folkestone, Dover, Sandwich, Ramsgate and Margate, "with plans for the improvement of each harbour, and for keeping its mouth permanently free from bars; also plans and sections for Refuge Harbours at Brighton! Dungeness!! and Dover are appended to the whole." We need hardly say that the notes of admiration are our own. However we cordially, we *feelingly*, wish him success; this is verily " bearding the lion in his den," we only hope he may not have got out of his depth, and as he appears to have read, or at least has quoted, some ten or twelve antiquated Italian and French writers on these subjects, will he permit us to recommend to his notice, before entering on such gigantic labours, the more modern works of Emy, Brémontier, and De la Coudraye upon the practical effects of waves upon sea beaches and erections in the sea; also Mr. Scott Russell, and the brothers Weber on the theory of waves*; and above all Professor Airy's masterly essay on ' tides and waves' in a late volume of the *Encyclopædia Metropolitana.*

The Shipowners and Shipmasters Directory, *to the Foreign Port Charges at nearly* 350 *of the Principal Ports in all the countries of the World.*—By James Daniel.—London. Taylor, Minories.

* *Wellenlehre au Experimente gegrundet.*

We have already* given our commendation of this useful work, and we have it again before us, as expressed in the Title page "brought up to September 1844." A ship should as soon go to sea without it as without anchors and cables, and we will venture to say that there are few skippers who would do that. But having given it this eulogium we would warn the compiler against introducing into it what we would call supernumerary matter. The work is growing like a goodly tree, and will grow yet to a considerable bulk, and care should therefore be taken to lop off useless branches and preserve those which will produce good fruit. We have no objection to see inserted the general depth of a harbour, or that of a barred entrance to a river, but a work of this kind has nothing to do with Sailing Directions or Charts, which if introduced at all must, always be imperfect, and therefore should be omitted. Besides, in harbours or off harbours, shipsiare generally in the hands of pilots, and if indeed the Captain would try his hand at bringing her up, which we would by no means prevent his doing, let him refer to his proper tackle which he obtains from the Hydrographer, in the shape of Charts and Sailing Directions. Again there is much useful matter which it behoves the Captain to know concerning the laws, rules and regulations of the place to which he is bound, and which should be given in the Shipmasters Directory, because they so immediately concern him. And they would save him a great deal of enquiry, besides prevent him from unintentionally breaking those rules, and thereby commencing a series of heart-burnings and their awkward accompaniments. In fact the work should be the Captain's friend, his vade mecum, initiating him into the habits of the place to which he is going, and should tell him what to expect and what to do when he gets there. Much of the kind of information we mean will be found in a valuable contribution to this journal a year or two ago, by a most intelligent skipper who made a trip to St. Petersburgh, and another lately to Rio.

In all cases the scale of pilotage charged on vessels entering the port should be given, and a vast deal of the information to which we have alluded might be compresed into a small compass. We also recommend the different charges stated in the current coin of the place, to be given also in our own, for although rates of exchange may vary a little, still such information would be useful. We might enumerate many places of which we find no mention, such as Nassau, the port of Bahamas, Vera Cruz, &c., but as we have observed already the work is yet young, and is no less worthy on that account of patronage.

Tables shewing the Progress of the Shipping Interest of the British Empire, United States, and France.—By G. Bayley.—London, Smith and Elder, 1844.

Consists of sixty-one tables shewing the number of vessels, tonnage, and amount of duties collected at the principal ports, compiled with great care and forming a little work of very useful reference.

Barrow's Life of Sir Francis Drake.—*Murray,*

We are glad to see that the above work has so soon found its way into a Second Edition, and that Mr. Murray has reprinted it as one of the numbers of the Colonial and Home Library, so that it will now be within the reach of all classes of readers.

Mr. Barrow has announced that he has in preparation the "Naval Worthies" of Queen Elizabeth's reign, illustrated with numerous original, and hitherto unpublished letters, which, we doubt not, will possess the same interest that has been created by those of Sir Francis Drake, which Mr. Barrow's industry has brought to light.

The letters of the Lord High Admiral, "time honoured" Howard of Effingham," will be hailed as a great literary treat.

* Nautical Magazine, 1843 p. 371.

THE DISPATCHES AND LETTERS OF VICE-ADMIRAL LORD VISCOUNT NELSON, *with Notes by Sir Nicolas Harris Nicolas,* G.C., M.G. *The first volume* 1777 *to* 1794.—London, Colburn.

Naval Literature has seldom received so valuable a contribution as the work announced in the above title, the first volume of which is now before us, and the second of which we are informed by a note, is to appear early in January. We cannot too highly commend the original idea of publishing these important despatches: they told of thoughts and deeds of high import in the words of their author, and related historical facts which concerned the whole civilized world at the time they were committed to paper. To give them to the followers of that profession of which Nelson was so bright an ornament, all that was required lay in the power of a discreet editor, who could discriminate between what concerned, and what did not concern, the public life of their great author. Sir Harris Nicolas has performed this task with judgment and good taste. He has first put the reader in possession of the names and authors of all the published works concerning Nelson, and then explaining the course which he considered it his duty to follow, traces the hero of his tale in his own words, from his entering the navy down to the great events in which Nelson took so conspicuous a part in 1794 at Corsica, in command of the Agamemnon. Thus far the first volume. We must not, however, omit to mention, that Sir Harris Nicolas, (who complains of an unaccountable apathy in certain quarters to his applications for Nelson's letters, and which we hope will not be without good effect,) has added many useful notes, which identify the persons mentioned in the letters, and very materially assist the reader. We wish the work all the success which it deserves, and will venture to promise it favor from the navy.

An illustrated geography on an entirely new, but very simple and most comprehensive plan, originated by Commander James Mangles, R.N., is preparing for the press. The author's aim of illustrating the relative position of places, with reference to the nearest remarkable town or city, by means of a multitude of small sectional maps, as well as the position and features of harbours in the same manner, seems well calculated to assist the reader of voyages and travels by a small book, without encumbering him with a large Atlas. The plan is capable of being carried to any extent.

NEW CHARTS.

(Published by the Admiralty and sold by R. B. Bate, 21, Poultry.)

AYR HARBOUR.—*West Coast of Scotland.—by Com. Robinson,* 1840.

COAST OF BORNEO.—*From Tanjong Datoo, to the river Morotaba,—by Capt. Sir E. Belcher,* 1843.

MAULMAIN HARBOUR.—*Gulf of Bengal.—by Com. Owen Stanley,* 1842.

PORTS EGYLAR.—*Mersin, Sykia, Mandri Channel.—by Com. Graves,* 1837, 1840.

THE ISLAND OF KHIOS, *with the ancient Strait, and the adjacent coast, from Karubonrnou to Sighajik.—by Com. Graves,* 1835.

PORTS LAGO AND ROSSO.—*Adriatic.—by Capt. Smyth.*

PORTS TARANTO, COTRONI, GALLIPOLI.—*by Capt. Smyth,* 1819.

PORTS KERSO, MALTEMPO, UNIE-RE, S. PIETRO DI NEMBO,—*by Capt. Smyth.*

SANO JOA ISLANDS.—*Brazil.—by Com. C. E. Buckle.*

SAN ALEIXO ISLAND.—*by Com. C. E. Buckle.*

SOUTH AMERICAN EAST COAST.--*Union Bay to Rio Negro.—by Capt. R. FitzRoy,* 1833.

NAVAL INTELLIGENCE.

Apollo, 24th Oct. arr. at Portsmouth for Troops.—*Albion,* 80, Capt. Lockyer, 6th Oct. at Gibraltar, going to Lisbon.—*Alfred,* Com. Purvis, 9th July arr. Rio from M. Video, removed 15th Sept.—*America,* 50, Capt. Gordon, 31st July,

arr. Rio from England.—*Ardent*, Com. Russell, 27th July at Rio, going to Ascension.—*Apollo*, 3rd Nov. at Cork.—*Amazon*, 26, com. at Chatham, by Capt. J. T. Stopford.—*Alert*, 6, Com. Bosanquet, 27th August arr. Gambia from West Indies.—29th, sailed for Arguin, C. Blanco.

Basilisk, 6, Lieut. Hunt, 2nd May at Papiete.—*Beacon*, sur.v., Com Graves, 20th Oct. left Smyrna for Malta.—*Bittern*, 16, Com. E. Peel, 23rd June off Quillimaine.

Cornwallis, 72, Capt. P. Richards, 26th August, arr. Simons Bay from Trincomalee, 5th Sept. sailed, 4th Nov. arr. at Portsmouth 7th, sailed for Plymouth, paid off 22nd.—*Cleopatra*, Capt. Wyvill, 24th Aug. at Simons Bay, from Mozambique.—*Conway*, 26, Capt. Kelly, 8th Sept. in Simons Bay, to proceed to Mauritius.—*Cormorant*, Lieut.-Com. Gordon, 16th Aug. arr. Callao, with flag of Admiral Thomas.—*Champion*, 28, Com. Clavell, on way home, arr. Rio, 24th Sept. 19th, Nov. arr at Portsmouth, 47 days from Rio.

Dolphin, 3, left Rio, 5th Sept.—*Dædalus*, 6, Com. by Capt. Mc Quhae at Woolwich.—*Devastation*, st.v. at Constantinople. Dublin 7th Aug. left Valparaiso.

Electra, 10, Com. Darley at Grenada 26th Sept., on way to Trinidad.—*Eclair*, Lieut. B. Estcourt, 31st Oct. left Portsmouth for Africa.—*Eagle*, 50, com. at Sheerness, by Capt. Martin.—*Electra*, at Grenada from Trinidad, 12th Oct., 15th to sail for Antigua.—*Eurydice*, 26, Capt. Elliott, 16th Oct. at Halifax from Newfoundland on way to Barbados.

Formidable, 84, Capt. Rich arr. Malta 26th Sept. from Gibraltar, remained 22nd Oct.—*Fox*, 42, Capt. Sir H. Blackwood, 24th Aug. at Rio from Tangier.—*Flamer*, st.v. Lieut Postle, 18th Oct. at Cork.—*Firebrand*, st.v. Capt. Corry, 24th Oct. at Plymouth, sailed 20th.—*Fair Rosamond*, Lieut. Bulman, 31st Oct. arr. Portsmouth from W. Indies.—*Ferret*, 13th Sept. at St. Helena from Ascension. *Fair Rosamond*, 9th paid off.—*Fisgard*, 42, 13th July at Tahiti.—*Fox*, 42, Capt. Capt. Sir H. Blackwood, 31st July left Rio for Cape.

Griffon, Lieut. Jenkin, 20th Sept. at Port Royal, coming home; 14th Nov. arr. Portsmouth from Bermuda.

Hecla, Com. Duffill, arr. Portsmouth 24th Oct. from Woolwich, sailed 27th for Mediterranean.—*Hydra*, st.v. Com. Young, 26th Aug. left St. Helena.—*Hyacinth*, 18, Com. Scott, on way to W. Indies from Africa.—*Hydra*, 18th Sept. at Ascension.—*Hazard*, 18, Com. Bell, 20th May at Sydney.

Iris, 44, Capt. Sir J. Marshall, 31st Aug. left Simons Bay for Ichaboe.—*Iris* 26, Capt. Munday, arr. Hong-Kong 27th July.—*Illustrious*, 72, Capt, Erskine, 2nd Nov. left Halifax for Bermuda.

Lark, at Nassau 20th Oct.—*Larne*, 20, Com. Brisbane, on way to W. Indies from Africa.—*Lynx*, 10th Nov. at Tarbert, supposed going to Lisbon.

Mastiff, surv.v., Mr. G. Thomas, arr. Woolwich from the Orkneys.—*Nimrod*, 20, Com. Glasse, arrived at Plymouth 9th Nov., 91 days from Bombay to pay off.

Orestes, 18, at Patras 15th Oct.—*Pique*, 36, Capt. Stopford, 10th Sept. arr. at Quebec from Halifax.—*Pickle*, Lieut. Bainbridge, 9th Oct. at Jamaica.—*Penelope*, st.v. Capt. Jones, 10th Sept. at Ascension.

Racer, 16, Com. Reid, 5th Sept. at Bahia.—*Resistance*, 16th Nov. left Plymouth for Cork.—*Savage*, Lieut. Bowker, to leave Malta for England 10th Oct. —*Stromboli*, st.v. Com. Plunkett, 12th Oct. at Cork.—*Spartan*, Capt. Elliott, 17th Sept. left Port Royal for Vera Cruz.—*Serpent*, 16, Com. Nevill, 29th Sept. at Bombay from Trincomalee.—*Spiteful*, st.v., left Hongkong 24th June for Amoy, Foo-chow-Foo, Ningpo, and Shang-hae—*Sparrow*, sur.v., Com. Otter, 17th Nov. arr. Portsmouth.—*Snake*, 16, Com. Devereux, 1st Nov. left Malta for Tunis.—*Scout*, 15th Oct. at Barcelona.—*Salamander*, st.v., 15th July at Tahiti.

Tyne, 26, Capt. Glasscock, 14th Oct, left Alexandria for Beyrout.—*Tartarus*, 3rd Nov. at Cork.—*Thunderbolt*, st.v., Com. Broke, 5th Sept. Simons Bay, 9th Sept. arr. Algoa Bay, with H.E. Sir P. Maitland and suite, 10th left for, and arrived at Table Bay.—*Thalia*, 42, Capt. Hope, 11th June at Tahiti.

Vesuvius, st.v., Com. Ommaney, paid off at Woolwich.—*Victoria and Albert*, Captain Lord A. Fitzclarence, 9th Nov. into dock at Portsmouth.—*Vestal*, 26, Capt. Talbot, arr. Simons Bay, 12th left for M. Video.

Warspite, 50, Capt. Wallis, 31st Oct. left Malta for Athens.—*Winchester*, 5th Sept. in Simons Bay.

SHIPS in PORT Portsmouth Harbour.—*Excellent, Victory, Victoria and Albert, Volcano, Fearless, Comet, Dwarf, Sylvia, Sparrow.* At Spithead—*Champion.* At Plymouth, Harbour—*San Josef, Snipe, Alban, Confiance.*

PROMOTIONS AND APPOINTMENTS.

Whitehall, Nov. 11.—The Queen has been pleased to direct letters patent to be passed under the Great Seal, granting the dignity of Baronet of the United Kingdom of Great Britain and Ireland, unto Vice-Admiral Sir William Parker, of Shenstone Lodge, in the county of Stafford, G.C.B., and to the heirs male of his body lawfully begotten.

PROMOTIONS.

COMMANDERS—T. Smith of *Victory*, and acting flag lieutenant to the Admiralty Board—R. Jones of *Victory*, Commanding Officer of the ship at the moment of Her Majesty's late visit to her in remembrance of Trafalgar Day—J. C. Prevost flag lieutenant to Sir Charles Rowley, and W. C. Chamberlain commanding the *Dwarf*, who acted as flag lieutenant to Admi. Baron La Susse.

LIEUTENANTS—R. C. Tatnell of *St. Vincent*—A. G. West to *Firebrand.*

The above Promotions are in honour of Her Majesty's Visit to Portsmouth.

CAPTAIN—W. H. Hall of *Victoria and Albert* yacht.

COMMANDER—W. Tringham of *Victoria and Albert* yacht.

LIEUTENANTS—Hon. G. H. Douglas and L. P. Pigott of *Victoria and Albert.*

APPOINTMENTS.

CAPTAINS—J. J. Stopford to *Amazon.* C. R. D. Bethune, CB., to special service in the Island of Borneo—E. Harvey to be Captain of Walmer Castle—G. B. Martin, CB., to *Eagle.*

COMMANDER—W. Crispin to *Victoria and Albert* yacht.

LIEUTENANTS—W. H. Hire to *Bonetta*—A. Barrow and J. W. Pobert to *Snake*—G. Pyne to *Warspite*—G. Hancock and J. Daly to *Eagle*—W. Robson to command *Nautilus*—C. A. Isaacson to *Eclair*—P. A. Halkett to *Caledonia*—F. H. Stephens to Orestes—Lord C. W. Buller to *Medea*—C. J. Hoffmeister to *Amazon.*

MASTERS—A. L. Vanzetti to *Eagle*—J. T. Sullivan to *Hydra.*

MATES—H. S. Jackson to *Eagle*—J. King to *Apollo.*

SECOND MASTER—W. H. Mullard to *St. Vincent.*

MIDSHIPMAN—W. F. M'Killop to *Caledonia.*

DEPUTY INSPECTOR OF HOSPITALS and FLEETS—G. King, to *Minden.*

ASSISTANT SURGEON—J. Forbes, J. Cronin, G. Simpson and J. Wade to *Victory*—D. Durgan and J. Collings to *Agincourt*—D. Lyall, MD., and J. Miller to *Formidable*—G. Yeo and D. Coulter to *Penelope*—A. Moffit to *Eagle*—J. Daffer to *Linnet*—R. Wilcox to *Volcano*

CHAPLAINS—Rev. P. Smith to *Tyne*—G. W. Tucker to *Albion*—J. Fauls to *Eagle.*

NAVAL INSTRUCTOR—J. Gowen to *Eagle.*

PAYMASTERS and PURSERS—H. Haile to the Accountant General's Department at Somerset House—W. H Brown to *Amazon*—J. Thompson to *Eagle.*

CLERKS—G. Reilly to *Caledonia*—G. M. Lang and J. M. Ralph to *Eagle.*

COAST GUARD.

Appointments—Lieut. Baskerville to Kessingland—Lieut. Macdonald to command a station.

Removals—Lieut. Barret to Newquay—Lieut. Servante to Carlingford district—Mr. Carey to Strangford district—Lt. J. W. Patterson to Cromarty—Lieut. Jeffrys to St. Andrews—Lieut Cox to *Lapwing.*

Births, Marriages, and Deaths.

BIRTHS.

At Shooters Hill, the widow of Lieut. Nichols of a daughter.

At Malta, Oct. 11, the lady of Capt. Hallet, RN., of a son.

At Batheaston, Nov. 15, the lady of Capt. S. Dacres, RN. of a son.

At Brighton, Nov. 19, lady of Capt. Preston, RN. of a son.

MARRIAGES.

At Christ Church, Marylebone, Nov. 20th, Capt. T. Dickinson. RN.. to Maria, widow of T. Senior, Esq., of Great Ealing.

At Devonport, Nov. 19, Mr. J. P. Jackman to Charlotte, daughter of Com. C. Patey, RN.

DEATHS.

At Bathford, on the 16th Nov., Rear Admi. Cochrane, at an advanced age.

At Shirley, Nov. 12, Lieut. J. F. Browne, RN. in 47th year.

In Coleraine, Com. J. Nicholls.

At Studeley, Capt. F. Holyoake, formerly consul at Dunkirk.

Nov. 6, Lieut. M, R. Dyett.

At Deal, Nov. 20, Com. G, Plowman.

Lately W. Oakley, Esq. Purser, aged 85.

At Jersey, Oct. 23, Licut. Sherreff, aged 49.

METEOROLOGICAL REGISTER.

Kept at Croom's Hill, Greenwich, by Mr. W. Rogerson, of the Royal Observatory.

From the 21st October, to the 20th November, 1844.

Month Day.	Week Day.	Barometer.		Fahrenheit Thermometer, In the Shade.				Wind.				Weather.	
								Quarter.		Strength			
		9 A.M.	3 P.M.	9 A.M	3 P.M.	Min	Max	A.M.	P.M.	A.M.	P M.	A.M.	P.M.
		In Dec.	In Dec.	o	o	o	o						
21	M.	29·55	29·58	47	48	43	49	SE	SE	1	1	o	or (3) (4)
22	Tu.	29·78	29·88	45	49	42	51	W	W	2	2	or (1) (2	bc
23	W.	29·94	29·88	34	50	31	51	NE	NE	1	1	bf	bc
24	Th.	29·75	29·71	47	48	45	49	NE	NE	2	2	or (1) (2)	or (3) (4)
25	F.	29·76	29·82	47	48	45	49	NE	N	4	3	or (1) (2)	or (3)
26	S.	29·96	30·00	45	49	42	50	W	N	3	2	o	or (3)
27	Su.	30·25	30·29	45	48	42	49	N	NE	2	1	o	bcm
28	M.	30·25	30·20	40	47	34	48	E	E	1	1	o	o
29	T.	30·08	30·00	44	48	37	49	E	E	1	1	o	or 4)
30	W.	29·85	29·85	44	46	43	47	E	E	2	1	or (1) (2)	o
31	Th.	29·84	29·78	41	49	38	50	E	E	3	3	b	b
1	F.	29·55	30·40	46	47	42	48	E	E	5	7	qo	qor 4)
2	S.	29·15	29·17	43	43	42	44	E	E	6	4	qor (1) (2)	or (3) 4)
3	Su.	29·31	29·35	38	38	37	39	NE	NE	3	3	or (1) (2	o
4	M.	29·35	29·29	42	43	37	45	NW	NW	4	4	o	o
5	Tu.	29·20	29·20	40	44	35	45	S	E	2	1	o	o
6	W.	29·30	29·27	39	43	38	44	SW	SW	2	2	or 1)	bc
7	Th	29·42	29·40	42	47	37	48	SE	SE	3	3	or (1) (2)	bc
8	F.	29·10	29·03	44	51	43	52	SE	SE	3	3	bcp (2)	bcp (3) (4)
9	S.	29·00	28·98	47	47	45	49	S	SW	1	1	bcp (1) (2)	bc
10	Su.	29·20	28·96	40	43	38	46	S	SE	2	2	bc	or (3)
11	M.	29·20	29·40	40	45	37	46	NW	NW	5	6	qbc	qbcp (4)
12	T.	29·42	29·45	47	51	40	54	SW	SW	5	2	qor (1) (2)	od (3) (4j
13	W.	29·57	29·57	54	53	53	55	SW	SW	6	6	qor (1) (2)	qor 3
14	Th.	30·05	30·11	47	49	43	50	SW	SW	I	1	od 2)	od 3 4
15	F.	30·12	30·04	53	55	49	57	SW	SW	6	5	qo	qbc
16	S.	30·22	30·24	51	56	46	58	SW	SW	1	1	o	o
17	Su.	30·35	30·33	53	54	49	55	W	W	1	1	o	od 4
18	M.	30·30	30·24	51	51	5	52	SW	SW	1	1	o	o
19	Tu	30·20	30·20	50	59	49	51	SW	SW	1	1	o	o
20	W.	30·14	30·17	47	52	46	53	SW	SW	2	2	o	bc

October, 1844. —Mean height of the Barometer=29·712 inches; Mean temperature=49·3 degrees; depth of rain fallen 4·08 inches.

TO OUR FRIENDS AND CORRESPONDENTS.

Notwithstanding we have increased our present number we have been compelled by a pressure of matter to reserve our account of the proceedings at Birkenhead entire for our next number, rather than give a partial account of it in this. Several other subjects are also on the same account reserved. The letter from the "Helen Stewart," has reached us, and will appear in our next, as well as the "Doings of the Hurricane."

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ERRATA.

Page 142, line 11 for "Flcg" read "Flacq."
229, line 3 for "Communia proprie dicere," read "Communia propria dicere."
243, line 3 from bottom, for "Espiritu" read "Espiritu."
line 3 for "109°" read "109′."
252, line 5 from foot, flag ship distant.
253, Gallipoli.
374, line 6 for "vigilence" read "vigilance."
491, line 18 for "Bacchants" read "Bacchante."
506, in title of the paper, for "Eyde" read "Edye."
519, line 30 for "commond" read "command."
566, for "observations," read "observatories."
603 note, for "synonyime" read, 'synonyme."

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